

## **NOTICE OF 30-DAY PERIOD FOR PUBLIC COMMENT**

### **Preliminary Findings Regarding a Part 70 Permit for **Richmond Liner Foundry and Machining Plant,** **Perfect Circle Division, Dana Corporation** in **Wayne County****

Part 70 No.: T 177-6887-00090

Notice is hereby given that the above-mentioned company, located at 2153 and 2175 Williamsburg Pike, Richmond, Indiana 47375, has made application to the Indiana Department of Environmental Management (IDEM), Office of Air Quality (OAQ) for a Part 70 Permit for the iron sleeve casting and machining source. A proposed Part 70 Permit was originally submitted to public comment from March 9 through April 8, 1999, but was never issued due to extensive changes by IDEM, OAQ and requests by the company.

A Part 70 permit consolidates all of a source's applicable air pollution control requirements into one permit. This proposed Part 70 permit includes provisions that ensure that compliance with these requirements can be determined.

This proposed Part 70 permit does not contain any new proposed emission units; however, some conditions from previously issued permits/approvals have been corrected or removed. This notice is also intended to fulfill the new source review procedures applicable to those conditions.

Notice is hereby given that there will be a period of thirty (30) days from the date of publication of this notice during which any interested person may comment on why this proposed permit should or should not be issued. Appropriate comments should be related to any air quality issues, interpretation of the state and federal rules, calculations made, technical issues, or the effect that the operation of this source would have on any aggrieved individuals. IDEM, OAQ does not have jurisdiction in specifying and implementing requirements for zoning, odor or noise. For such issues, please contact your local officials.

A copy of the application and draft permit is available for examination at the Morrisson-Reeves Public Library located at 80 North Sixth Street, Richmond, Indiana. A copy of the draft permit is also available for examination at [www.IN.gov/idem/air/permits/](http://www.IN.gov/idem/air/permits/). All statements, along with supporting documentation, should be submitted in writing to the IDEM, OAQ, 100 North Senate Avenue, P.O. Box 6015, Indianapolis, Indiana 46206-6015. If adverse comments concerning the **air pollution impact** of this proposed permit are received, together with a request for a public hearing, such a hearing may be held to give further consideration to this application.

Persons not wishing to comment at this time, but wishing to receive notice of future proceedings conducted related to this action, must submit a written request to the OAQ, at the above address. All interested parties of record will receive a notice of the decision on this matter and will then have fifteen (15) days after receipt of the Notice of Decision to file a petition for administrative review. Procedures for filing such a petition will be enclosed with the Notice.

Questions should be directed to Mark L. Kramer, c/o OAQ, 100 North Senate Avenue, P.O. Box 6015, Indianapolis, Indiana, 46206-6015, at 631-691-3395 or in Indiana at 1-800-451-6027 (ext. 631-691-3395).

Paul Dubenetzky, Chief  
Permits Branch  
Office of Air Quality

MLK/MES

# **PART 70 OPERATING PERMIT OFFICE OF AIR QUALITY**

**Richmond Liner Foundry and Machining Plant, Perfect Circle  
Division,  
Dana Corporation  
2153 and 2175 Williamsburg Pike  
Richmond, Indiana 47375**

(herein known as the Permittee) is hereby authorized to operate subject to the conditions contained herein, the source described in Section A (Source Summary) of this permit.

This permit is issued in accordance with 326 IAC 2 and 40 CFR Part 70 Appendix A and contains the conditions and provisions specified in 326 IAC 2-7 as required by 42 U.S.C. 7401, et. seq. (Clean Air Act as amended by the 1990 Clean Air Act Amendments), 40 CFR Part 70.6, IC 13-15 and IC 13-17.

Operation Permit No.: T 177-6887-00090	
Issued by: Janet G. McCabe, Assistant Commissioner Office of Air Quality	Issuance Date:  Expiration Date:

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## SECTION A

## SOURCE SUMMARY

This permit is based on information requested by the Indiana Department of Environmental Management (IDEM), Office of Air Quality (OAQ). The information describing the source contained in Conditions A.1, A.3 and A.4 is descriptive information and does not constitute enforceable conditions. However, the Permittee should be aware that a physical change or a change in the method of operation that may render this descriptive information obsolete or inaccurate may trigger requirements for the Permittee to obtain additional permits or seek modification of this permit pursuant to 326 IAC 2, or change other applicable requirements presented in the permit application.

### A.1 General Information [326 IAC 2-7-4(c)] [326 IAC 2-7-5(15)] [326 IAC 2-7-1(22)]

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The Permittee owns and operates a stationary grey and ductile iron sleeve casting and machining source, consisting of two (2) plants designated as Plants 1 and 2.

Responsible Official:	Tim Boncher, or the person holding the title of Plant Manager or the Richmond Machine Plant Manager or the acting Richmond Machine Plant Manager
Source Address:	2153 and 2175 Williamsburg Pike, Richmond, Indiana 47375
Mailing Address:	P.O. Box 1446, Richmond, Indiana 47375
General Source Phone Number:	317-935-7800
SIC Code:	3321, 3398 and 3592
County Location:	Wayne
Source Location Status:	Attainment for all criteria pollutants
Source Status:	Part 70 Permit Program Major Source, under PSD rules Major Source, Section 112 of the Clean Air Act 1 of 28 Source Categories

### A.2 Part 70 Source Definition [326 IAC 2-7-1(22)]

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This stationary iron sleeve casting and machining source consists of two (2) plants:

- (a) Plant 1 is located at 2153 Williamsburg Pike; Richmond, Indiana (177-00004), and
- (b) Plant 2 is located at 2175 Williamsburg Pike, Richmond, Indiana (177-00013).

Since the two (2) plants are located on contiguous or adjacent properties, belong to the same industrial grouping, and under common control of the same entity, they were considered one (1) source in MSM 177-11453-00090, issued on November 17, 1999.

### A.3 Emission Units and Pollution Control Equipment Summary [326 IAC 2-7-4(c)(3)] [326 IAC 2-7-5(15)]

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This stationary source consists of the following emission units and pollution control devices:

- (a) Two (2) alternating cupolas, known as Unit ID 010, (only one (1) operates at a time) installed in 1960, each equipped with a venturi scrubber system, known as Unit ID VS#10, consisting of two (2) natural gas-fired afterburners with propane as a back-up fuel for CO control, rated at 8.0 million British thermal units per hour, each, one (1) quencher tank, one (1) venturi scrubber and demister, exhausted through Stack 010, capacity: 12.8 tons of metal per hour, each.
- (b) Three (3) electric induction melting furnaces (#2, #3, and #4), known as Unit ID 020, equipped

with a baghouse, known as Unit ID DC#13, exhausted through Stack 013 or exhausted by overhead fans through Stacks 020 and 070, general exhausts, installed in 1972, capacity: 3.5 tons of metal per hour, each (baghouse does not have to be operated at all times).

- (c) One (1) electric induction melting furnace (#1), known as Unit ID 021, installed in 1996, equipped with a baghouse, known as Unit ID DC#13, exhausted through Stack 013, capacity: 4.8 tons of metal per hour (baghouse does not have to be operated at all times).
- (d) Seven (7) electric holding furnaces (40 ton and Group 3 through Group 8 electric holding furnaces) and hot metal transfer ladles, known as Unit ID 030, installed in 1960, exhausted through Stack 030, charging capacity: 23.3 tons of metal per hour, total.
- (e) One (1) electric holding furnace (1996) and hot metal transfer ladles, known as Unit ID 031, exhausted through Stack 031, installed in 1996, capacity: charging 4.8 tons of metal per hour.
- (f) One (1) natural gas indirect-fired burner using propane as a back-up fuel supplying hot blast air to cupola, known as Unit ID 040, exhausted through Stack 040, installed in 1999, capacity: 14.0 million British thermal units per hour.
- (g) One (1) tundish ladle for Group 3 spinner machines and two (2) back-up tundish ladles for magnesium inoculation, known as Unit ID 050, exhausted through vent Stack 050a and through roof ventilation Stack 050b, installed in 1960, capacity: 4 tons of iron treated per hour.
- (h) One (1) cupola charge handling operation, known as Unit ID 060, exhausted through Stack 060, installed in 1960, capacity: 12.8 tons of metal per hour.
- (i) One (1) electric furnace charge handling operation, known as Unit ID 070, exhausted through Stack 070, installed in 1972, capacity: 10 tons of metal per hour.
- (j) One (1) direct-fired scrap charge pre-heater, known as Unit ID 080, equipped with a baghouse, known as Unit ID DC#13, exhausted through Stack 013, installed in 1972, capacity: 10 tons of metal per hour (baghouse does not have to be operated at all times).
- (k) Seven (7) centrifugal casting operations, known as Unit ID 090, consisting of three (3) long tube spinners (Group 1), thirty-three (33) regular spinners (Groups 3 through Group 6 and Group 8), equipped with six (6) baghouses, known as DC#1, DC#2A, DC#3, DC#4, and DC#7 & DC#8, exhausting through Stacks 090h, 090g, 090a, 090b, and 090e & 090f, respectively, and one (1) rotary turntable (Group 7), equipped with two (2) baghouses, known as DC#5 & DC#6, exhausting through Stacks 090c and 090d, installed in 1960, capacity: 40 tons of metal per hour, total.
- (l) One (1) longtube 92-inch centrifugal casting machine (spinner #18) (Group 1), known as Unit ID 090, equipped with a baghouse, known as DC#1, exhausting through Stack 090h, installed in 2001, capacity: 1.70 tons of metal per hour.
- (m) Four (4) longtube 60-inch centrifugal casting machines (spinners #41, #43, #45, and #47) (Group 4), Unit ID 090, equipped with a baghouse, known as DC#3, exhausting through Stack 090a, installed in 2001, capacity: 1.11 tons of metal per hour each.
- (n) Three (3) shot blasters, capacity: 30 tons of metal cleaned per hour, total, consisting of:



- (1) One (1) shot blaster [one (1) hanging conveyORIZED (cleaning mill #1)], known as Unit ID 100, equipped with a baghouse, known as DC#2, equipped with a bag leak detection system, exhausted through Stack 100a, installed prior to 1969.
- (2) Two (2) rotoblaster (cleaning mill #3 and #5), known as Unit ID 100, equipped with interchangeable baghouses, known as DC#10 and DC#9, each equipped with a bag leak detection system, exhausted through Stacks 100b and 100c, installed in 1968 and 1978, respectively.
- (o) One (1) pangborn ES-2029-1\S000203 rotoblast cabinet (cleaning mill #7), known as Unit ID 100, equipped with an interchangeable baghouse, known as DC#10 or DC#9, each equipped with a bag leak detection system, exhausting through Stack 100b or 100c, installed in 2001, capacity: 13.0 tons of metal per hour, blast rate 80.75 tons of cast steel shot per hour.

A.4 Specifically Regulated Insignificant Activities [326 IAC 2-7-1(21)] [326 IAC 2-7-4(c)]  
[326 IAC 2-7-5(15)]

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This stationary source also includes the following insignificant activities which are specifically regulated, as defined in 326 IAC 2-7-1 (21).

- (a) Degreasing operations that do not exceed 145 gallons per 12 months, except if subject to 326 IAC 20-6. (326 IAC 8-3-2 and 326 IAC 8-3-5)
- (b) Any of the following structural steel and bridge fabrication activities: Cutting 200,000 linear feet or less of one inch (1") plate or equivalent; using 80 tons or less of welding consumables. (326 IAC 6-1)
- (c) Trimmers that do not produce fugitive emissions and that are equipped with a dust collection or trim material recovery device such as a bag filter or cyclone. (326 IAC 6-1)
- (d) Conveyors as follows: Covered conveyors for coal or coke conveying of less than or equal to 360 tons per day; Covered conveyors for limestone conveying of less than or equal to 7,200 tons per day for sources other than mineral processing plants constructed after August 31, 1983. (326 IAC 6-1)
- (e) Grinding and machining operations controlled with fabric filters, scrubbers, mist collectors, wet collectors and electrostatic precipitators with a design grain loading of less than or equal to 0.03 grains per actual cubic foot and a gas flow rate less than or equal to 4,000 actual cubic feet per minute, including the following: deburring; buffing; polishing; abrasive blasting; and pneumatic conveying operations including the following:
  - One (1) wet liner machining lathing operation controlled by a baghouse dust collector with a gas flow rate of 2,000 actual cubic feet per minute. (326 IAC 6-1)
- (f) Iron manganese phosphating operation (Lubrite). (326 IAC 6-1)
- (g) One (1) CNC lathe machining operation, equipped with a baghouse, known as DC#12. (326 IAC 6-1)

A.5 Part 70 Permit Applicability [326 IAC 2-7-2]

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This stationary source is required to have a Part 70 permit by 326 IAC 2-7-2 (Applicability) because:

- (a) It is a major source, as defined in 326 IAC 2-7-1(22);
- (b) It is a source in a source category designated by the United States Environmental Protection Agency (U.S. EPA) under 40 CFR 70.3 (Part 70 - Applicability).

## SECTION B

## GENERAL CONDITIONS

### B.1 Definitions [326 IAC 2-7-1]

Terms in this permit shall have the definition assigned to such terms in the referenced regulation. In the absence of definitions in the referenced regulation, the applicable definitions found in the statutes or regulations (IC 13-11, 326 IAC 1-2 and 326 IAC 2-7) shall prevail.

### B.2 Permit Term [326 IAC 2-7-5(2)] [326 IAC 2-1.1-9.5]

This permit is issued for a fixed term of five (5) years from the original date, as determined in accordance with IC 4-21.5-3-5(f) and IC 13-15-5-3. Subsequent revisions, modifications, or amendments of this permit do not affect the expiration date.

### B.3 Enforceability [326 IAC 2-7-7]

Unless otherwise stated, all terms and conditions in this permit, including any provisions designed to limit the source's potential to emit, are enforceable by IDEM, the United States Environmental Protection Agency (U.S. EPA) and by citizens in accordance with the Clean Air Act.

### B.4 Termination of Right to Operate [326 IAC 2-7-10] [326 IAC 2-7-4(a)]

The Permittee's right to operate this source terminates with the expiration of this permit unless a timely and complete renewal application is submitted at least nine (9) months prior to the date of expiration of the source's existing permit, consistent with 326 IAC 2-7-3 and 326 IAC 2-7-4(a).

### B.5 Severability [326 IAC 2-7-5(5)]

The provisions of this permit are severable; a determination that any portion of this permit is invalid shall not affect the validity of the remainder of the permit.

### B.6 Property Rights or Exclusive Privilege [326 IAC 2-7-5(6)(D)]

This permit does not convey any property rights of any sort or any exclusive privilege.

### B.7 Duty to Supplement and Provide Information [326 IAC 2-7-4(b)] [326 IAC 2-7-5(6)(E)] [326 IAC 2-7-6(6)]

- (a) The Permittee, upon becoming aware that any relevant facts were omitted or incorrect information was submitted in the permit application, shall promptly submit such supplementary facts or corrected information to:

Indiana Department of Environmental Management  
Permits Branch, Office of Air Quality  
100 North Senate Avenue, P. O. Box 6015  
Indianapolis, Indiana 46206-6015

The submittal by the Permittee does require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

- (b) The Permittee shall furnish to IDEM, OAQ, within a reasonable time, any information that IDEM, OAQ, may request in writing to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit, or to determine compliance with this permit. The submittal by the Permittee does require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34). Upon request, the Permittee shall also furnish to IDEM, OAQ, copies of records required to be kept by this permit or, for information claimed to be confidential, the Permittee may furnish such records directly to the U. S. EPA along with a claim of confidentiality. [326 IAC 2-7-5(6)(E)]



- (c) The Permittee may include a claim of confidentiality in accordance with 326 IAC 17.1. When furnishing copies of requested records directly to U. S. EPA, the Permittee may assert a claim of confidentiality in accordance with 40 CFR 2, Subpart B.

**B.8 Compliance with Permit Conditions [326 IAC 2-7-5(6)(A)] [326 IAC 2-7-5(6)(B)]**

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- (a) The Permittee must comply with all conditions of this permit. Noncompliance with any provisions of this permit is grounds for:
  - (1) Enforcement action;
  - (2) Permit termination, revocation and reissuance, or modification; or
  - (3) Denial of a permit renewal application.
- (b) Noncompliance with any provisions of this permit, except any provision specifically designated as not federally enforceable, constitutes a violation of the Clean Air Act.
- (c) It shall not be a defense for the Permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.
- (d) An emergency does constitute an affirmative defense in an enforcement action provided the Permittee complies with the applicable requirements set forth in Section B, Emergency Provisions.

**B.9 Certification [326 IAC 2-7-4(f)] [326 IAC 2-7-6(1)] [326 IAC 2-7-5(3)(C)]**

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- (a) Where specifically designated by this permit or required by an applicable requirement, any application form, report, or compliance certification submitted shall contain certification by a responsible official of truth, accuracy, and completeness. This certification shall state that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.
- (b) One (1) certification shall be included, using the attached Certification Form, with each submittal requiring certification.
- (c) A responsible official is defined at 326 IAC 2-7-1(34).

**B.10 Annual Compliance Certification [326 IAC 2-7-6(5)]**

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- (a) The Permittee shall annually submit a compliance certification report which addresses the status of the source's compliance with the terms and conditions contained in this permit, including emission limitations, standards, or work practices. The initial certification shall cover the time period from the date of final permit issuance through December 31 of the same year. All subsequent certifications shall cover the time period from January 1 to December 31 of the previous year, and shall be submitted in letter form no later than July 1 of each year to:

Indiana Department of Environmental Management  
Compliance Data Section, Office of Air Quality  
100 North Senate Avenue, P. O. Box 6015  
Indianapolis, Indiana 46206-6015

and



United States Environmental Protection Agency, Region V  
Air and Radiation Division, Air Enforcement Branch - Indiana (AE-17J)  
77 West Jackson Boulevard  
Chicago, Illinois 60604-3590

- (b) The annual compliance certification report required by this permit shall be considered timely if the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAQ, on or before the date it is due.
- (c) The annual compliance certification report shall include the following:
  - (1) The appropriate identification of each term or condition of this permit that is the basis of the certification;
  - (2) The compliance status;
  - (3) Whether compliance was continuous or intermittent;
  - (4) The methods used for determining the compliance status of the source, currently and over the reporting period consistent with 326 IAC 2-7-5(3); and
  - (5) Such other facts, as specified in Sections D of this permit, as IDEM, OAQ, may require to determine the compliance status of the source.

The submittal by the Permittee does require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

B.11 Preventive Maintenance Plan [326 IAC 2-7-5(1),(3) and (13)] [326 IAC 2-7-6(1) and (6)]  
[326 IAC 1-6-3]

- 
- (a) If required by specific condition(s) in Section D of this permit, the Permittee shall prepare and maintain Preventive Maintenance Plans (PMPs) within ninety (90) days after issuance of this permit, including the following information on each facility:
    - (1) Identification of the individual(s) responsible for inspecting, maintaining, and repairing emission control devices;
    - (2) A description of the items or conditions that will be inspected and the inspection schedule for said items or conditions; and
    - (3) Identification and quantification of the replacement parts that will be maintained in inventory for quick replacement.

If, due to circumstances beyond the Permittee's control, the PMPs cannot be prepared and maintained within the above time frame, the Permittee may extend the date an additional ninety (90) days provided the Permittee notifies:

Indiana Department of Environmental Management  
Compliance Branch, Office of Air Quality  
100 North Senate Avenue, P. O. Box 6015

Indianapolis, Indiana 46206-6015

The PMP and the PMP extension notification do not require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

- (b) The Permittee shall implement the PMPs as necessary to ensure that failure to implement a PMP does not cause or contribute to a violation of any limitation on emissions or potential to emit.
- (c) A copy of the PMPs shall be submitted to IDEM, OAQ, upon request and within a reasonable time, and shall be subject to review and approval by IDEM, OAQ. IDEM, OAQ, may require the Permittee to revise its PMPs whenever lack of proper maintenance causes or contributes to any violation. The PMP does not require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).
- (d) Records of preventive maintenance required by the PMP shall be retained for a period of at least five (5) years. These records shall be kept at the source location for a minimum of three (3) years. The records may be stored elsewhere for the remaining two (2) years as long as they are available upon request. If the Commissioner makes a request for records to the Permittee, the Permittee shall furnish the records to the Commissioner within a reasonable time.

**B.12 Emergency Provisions [326 IAC 2-7-16]**

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- (a) An emergency, as defined in 326 IAC 2-7-1(12), is not an affirmative defense for an action brought for noncompliance with a federal or state health-based emission limitation.
- (b) An emergency, as defined in 326 IAC 2-7-1(12), constitutes an affirmative defense to an action brought for noncompliance with a technology-based emission limitation if the affirmative defense of an emergency is demonstrated through properly signed, contemporaneous operating logs or other relevant evidence that describe the following:
  - (1) An emergency occurred and the Permittee can, to the extent possible, identify the causes of the emergency;
  - (2) The permitted facility was at the time being properly operated;
  - (3) During the period of an emergency, the Permittee took all reasonable steps to minimize levels of emissions that exceeded the emission standards or other requirements in this permit;
  - (4) For each emergency lasting one (1) hour or more, the Permittee notified IDEM, OAQ, within four (4) daytime business hours after the beginning of the emergency, or after the emergency was discovered or reasonably should have been discovered;  
  
Telephone Number: 1-800-451-6027 (ask for Office of Air Quality, Compliance Section), or  
Telephone Number: 317-233-5674 (ask for Compliance Section)  
Facsimile Number: 317-233-5967
  - (5) For each emergency lasting one (1) hour or more, the Permittee submitted the attached Emergency Occurrence Report Form or its equivalent, either by mail or

facsimile to:

Indiana Department of Environmental Management  
Compliance Branch, Office of Air Quality  
100 North Senate Avenue, P. O. Box 6015  
Indianapolis, Indiana 46206-6015

within two (2) working days of the time when emission limitations were exceeded due to the emergency.

The notice fulfills the requirement of 326 IAC 2-7-5(3)(C)(ii) and must contain the following:

- (A) A description of the emergency;
- (B) Any steps taken to mitigate the emissions; and
- (C) Corrective actions taken.

The notification which shall be submitted by the Permittee does not require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

- (6) The Permittee immediately took all reasonable steps to correct the emergency.
- (c) In any enforcement proceeding, the Permittee seeking to establish the occurrence of an emergency has the burden of proof.
- (d) This emergency provision supersedes 326 IAC 1-6 (Malfunctions). This permit condition is in addition to any emergency or upset provision contained in any applicable requirement.
- (e) IDEM, OAQ, may require that the Preventive Maintenance Plans required under 326 IAC 2-7-4-(c)(10) be revised in response to an emergency.
- (f) Failure to notify IDEM, OAQ, by telephone or facsimile of an emergency lasting more than one (1) hour in accordance with (b)(4) and (5) of this condition shall constitute a violation of 326 IAC 2-7 and any other applicable rules.
- (g) If the emergency situation causes a deviation from a technology-based limit, the Permittee may continue to operate the affected emitting facilities during the emergency provided the Permittee immediately takes all reasonable steps to correct the emergency and minimize emissions.

**B.13 Permit Shield [326 IAC 2-7-15] [326 IAC 2-7-20] [326 IAC 2-7-12]**

- (a) Pursuant to 326 IAC 2-7-15, the Permittee has been granted a permit shield. The permit shield provides that compliance with the conditions of this permit shall be deemed in compliance with any applicable requirements as of the date of permit issuance, provided that either the applicable requirements are included and specifically identified in this permit or the permit contains an explicit determination or concise summary of a determination that other specifically identified requirements are not applicable. The Indiana statutes from IC 13 and rules from 326 IAC, referenced in conditions in this permit, are those applicable at the time the permit was issued. The issuance or possession of this permit shall not alone constitute a defense against an alleged violation of any law, regulation or standard, except for the requirement to obtain a Part 70 permit under 326 IAC 2-7 or for applicable requirements for

which a permit shield has been granted.

This permit shield does not extend to applicable requirements which are promulgated after the date of issuance of this permit unless this permit has been modified to reflect such new requirements.

- (b) If, after issuance of this permit, it is determined that the permit is in nonconformance with an applicable requirement that applied to the source on the date of permit issuance, IDEM, OAQ, shall immediately take steps to reopen and revise this permit and issue a compliance order to the Permittee to ensure expeditious compliance with the applicable requirement until the permit is reissued. The permit shield shall continue in effect so long as the Permittee is in compliance with the compliance order.
- (c) No permit shield shall apply to any permit term or condition that is determined after issuance of this permit to have been based on erroneous information supplied in the permit application. Erroneous information means information that the Permittee knew to be false, or in the exercise of reasonable care should have been known to be false, at the time the information was submitted.
- (d) Nothing in 326 IAC 2-7-15 or in this permit shall alter or affect the following:
  - (1) The provisions of Section 303 of the Clean Air Act (emergency orders), including the authority of the U.S. EPA under Section 303 of the Clean Air Act;
  - (2) The liability of the Permittee for any violation of applicable requirements prior to or at the time of this permit's issuance;
  - (3) The applicable requirements of the acid rain program, consistent with Section 408(a) of the Clean Air Act; and
  - (4) The ability of U.S. EPA to obtain information from the Permittee under Section 114 of the Clean Air Act.
- (e) This permit shield is not applicable to any change made under 326 IAC 2-7-20(b)(2) (Sections 502(b)(10) of the Clean Air Act changes) and 326 IAC 2-7-20(c)(2) (trading based on State Implementation Plan (SIP) provisions).
- (f) This permit shield is not applicable to modifications eligible for group processing until after IDEM, OAQ, has issued the modifications. [326 IAC 2-7-12(c)(7)]
- (g) This permit shield is not applicable to minor Part 70 permit modifications until after IDEM, OAQ, has issued the modification. [326 IAC 2-7-12(b)(7)]

**B.14 Prior Permits Superseded [326 IAC 2-1.1-9.5]**

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- (a) All terms and conditions of previous permits issued pursuant to permitting programs approved into the state implementation plan have been either
  - (1) incorporated as originally stated,
  - (2) revised, or

(3) deleted

by this permit.

(b) All previous registrations and permits are superseded by this permit.

**B.15 Deviations from Permit Requirements and Conditions [326 IAC 2-7-5(3)(C)(ii)]**

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(a) Deviations from any permit requirements (for emergencies see Section B - Emergency Provisions), the probable cause of such deviations, and any response steps or preventive measures taken shall be reported to:

Indiana Department of Environmental Management  
Compliance Data Section, Office of Air Quality  
100 North Senate Avenue, P.O. Box 6015  
Indianapolis, Indiana 46206-6015

using the attached Quarterly Deviation and Compliance Monitoring Report, or its equivalent. A deviation required to be reported pursuant to an applicable requirement that exists independent of this permit, shall be reported according to the schedule stated in the applicable requirement and does not need to be included in this report.

The Quarterly Deviation and Compliance Monitoring Report does require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

(b) A deviation is an exceedance of a permit limitation or a failure to comply with a requirement of the permit.

(c) Emergencies shall be included in the Quarterly Deviation and Compliance Monitoring Report.

**B.16 Permit Modification, Reopening, Revocation and Reissuance, or Termination [326 IAC 2-7-5(6)(C)] [326 IAC 2-7-8(a)] [326 IAC 2-7-9]**

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(a) This permit may be modified, reopened, revoked and reissued, or terminated for cause. The filing of a request by the Permittee for a Part 70 permit modification, revocation and reissuance, or termination, or of a notification of planned changes or anticipated noncompliance does not stay any condition of this permit. [326 IAC 2-7-5(6)(C)] The notification by the Permittee does require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

(b) This permit shall be reopened and revised under any of the circumstances listed in IC 13-15-7-2 or if IDEM, OAQ, determines any of the following:

(1) That this permit contains a material mistake.

(2) That inaccurate statements were made in establishing the emissions standards or other terms or conditions.

(3) That this permit must be revised or revoked to assure compliance with an applicable requirement. [326 IAC 2-7-9(a)(3)]

(c) Proceedings by IDEM, OAQ, to reopen and revise this permit shall follow the same procedures as apply to initial permit issuance and shall affect only those parts of this permit for which

cause to reopen exists. Such reopening and revision shall be made as expeditiously as practicable. [326 IAC 2-7-9(b)]

- (d) The reopening and revision of this permit, under 326 IAC 2-7-9(a), shall not be initiated before notice of such intent is provided to the Permittee by IDEM, OAQ, at least thirty (30) days in advance of the date this permit is to be reopened, except that IDEM, OAQ, may provide a shorter time period in the case of an emergency. [326 IAC 2-7-9(c)]

**B.17 Permit Renewal [326 IAC 2-7-4]**

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- (a) The application for renewal shall be submitted using the application form or forms prescribed by IDEM, OAQ, and shall include the information specified in 326 IAC 2-7-4. Such information shall be included in the application for each emission unit at this source, except those emission units included on the trivial or insignificant activities list contained in 326 IAC 2-7-1(21) and 326 IAC 2-7-1(40). The renewal application does require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

Request for renewal shall be submitted to:

Indiana Department of Environmental Management  
Permits Branch, Office of Air Quality  
100 North Senate Avenue, P.O. Box 6015  
Indianapolis, Indiana 46206-6015

- (b) Timely Submittal of Permit Renewal [326 IAC 2-7-4(a)(1)(D)]

- (1) A timely renewal application is one that is:

- (A) Submitted at least nine (9) months prior to the date of the expiration of this permit; and
- (B) If the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAQ, on or before the date it is due.

- (2) If IDEM, OAQ, upon receiving a timely and complete permit application, fails to issue or deny the permit renewal prior to the expiration date of this permit, this existing permit shall not expire and all terms and conditions shall continue in effect, including any permit shield provided in 326 IAC 2-7-15, until the renewal permit has been issued or denied.

- (c) Right to Operate After Application for Renewal [326 IAC 2-7-3]

If the Permittee submits a timely and complete application for renewal of this permit, the source's failure to have a permit is not a violation of 326 IAC 2-7 until IDEM, OAQ, takes final action on the renewal application, except that this protection shall cease to apply if, subsequent to the completeness determination, the Permittee fails to submit by the deadline specified in writing by IDEM, OAQ, any additional information identified as being needed to process the application.

- (d) United States Environmental Protection Agency Authority [326 IAC 2-7-8(e)]

If IDEM, OAQ, fails to act in a timely way on a Part 70 permit renewal, the U.S. EPA may

invoke its authority under Section 505(e) of the Clean Air Act to terminate or revoke and reissue a Part 70 permit.

**B.18 Permit Amendment or Modification [326 IAC 2-7-11] [326 IAC 2-7-12]**

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(a) Permit amendments and modifications are governed by the requirements of 326 IAC 2-7-11 or 326 IAC 2-7-12 whenever the Permittee seeks to amend or modify this permit.

(b) Any application requesting an amendment or modification of this permit shall be submitted to:

Indiana Department of Environmental Management  
Permits Branch, Office of Air Quality  
100 North Senate Avenue, P.O. Box 6015  
Indianapolis, Indiana 46206-6015

Any such application shall be certified by the "responsible official" as defined by 326 IAC 2-7-1(34).

(c) The Permittee may implement administrative amendment changes addressed in the request for an administrative amendment immediately upon submittal of the request. [326 IAC 2-7-11(c)(3)]

**B.19 Permit Revision Under Economic Incentives and Other Programs [326 IAC 2-7-5(8)] [326 IAC 2-7-12(b)(2)]**

---

(a) No Part 70 permit revision shall be required under any approved economic incentives, marketable Part 70 permits, emissions trading, and other similar programs or processes for changes that are provided for in a Part 70 permit.

(b) Notwithstanding 326 IAC 2-7-12(b)(1)(D)(i) and 326 IAC 2-7-12(c)(1), minor Part 70 permit modification procedures may be used for Part 70 modifications involving the use of economic incentives, marketable Part 70 permits, emissions trading, and other similar approaches to the extent that such minor Part 70 permit modification procedures are explicitly provided for in the applicable State Implementation Plan (SIP) or in applicable requirements promulgated or approved by the U.S. EPA.

**B.20 Operational Flexibility [326 IAC 2-7-20] [326 IAC 2-7-10.5]**

---

(a) The Permittee may make any change or changes at the source that are described in 326 IAC 2-7-20(b), (c), or (e), without a prior permit revision, if each of the following conditions is met:

- (1) The changes are not modifications under any provision of Title I of the Clean Air Act;
- (2) Any preconstruction approval required by 326 IAC 2-7-10.5 has been obtained;
- (3) The changes do not result in emissions which exceed the emissions allowable under this permit (whether expressed herein as a rate of emissions or in terms of total emissions);
- (4) The Permittee notifies the:

Indiana Department of Environmental Management  
Permits Branch, Office of Air Quality  
100 North Senate Avenue, P. O. Box 6015



Indianapolis, Indiana 46206-6015

and

United States Environmental Protection Agency, Region V  
Air and Radiation Division, Regulation Development Branch - Indiana (AR-18J)  
77 West Jackson Boulevard  
Chicago, Illinois 60604-3590

in advance of the change by written notification at least ten (10) days in advance copy of this permit; and

- (5) The Permittee maintains records on-site which document, on a rolling five (5) year basis, all such changes and emissions trading that are subject to 326 IAC 2-7-20 (b), (c), or (e) and makes such records available, upon reasonable request, for public review.

Such records shall consist of all information required to be submitted to IDEM, OAQ, in the notices specified in 326 IAC 2-7-20(b), (c)(1), and (e)(2).

- (b) The Permittee may make Section 502(b)(10) of the Clean Air Act changes (this term is defined at 326 IAC 2-7-1(36)) without a permit revision, subject to the constraint of 326 IAC 2-7-20(a). For each such Section 502(b)(10) of the Clean Air Act change, the required written notification shall include the following:

- (1) A brief description of the change within the source;
- (2) The date on which the change will occur;
- (3) Any change in emissions; and
- (4) Any permit term or condition that is no longer applicable as a result of the change.

The notification which shall be submitted is not considered an application form, report or compliance certification. Therefore, the notification by the Permittee does not require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

- (c) Emission Trades [326 IAC 2-7-20(c)]  
The Permittee may trade increases and decreases in emissions in the source, where the applicable SIP provides for such emission trades without requiring a permit revision, subject to the constraints of Section (a) of this condition and those in 326 IAC 2-7-20(c).
- (d) Alternative Operating Scenarios [326 IAC 2-7-20(d)]  
The Permittee may make changes at the source within the range of alternative operating scenarios that are described in the terms and conditions of this permit in accordance with 326 IAC 2-7-5(9). No prior notification of IDEM, OAQ, or U.S. EPA is required.

**B.21 Source Modification Requirement [326 IAC 2-7-10.5]**

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A modification, construction, or reconstruction is governed by 326 IAC 2 and 326 IAC 2-7-10.5.

**B.22 Inspection and Entry [326 IAC 2-7-6] [IC 13-14-2-2]**

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Upon presentation of proper identification cards, credentials, and other documents as may be required by law, and subject to the Permittee's right under all applicable laws and regulations to assert that the information collected by the agency is confidential and entitled to be treated as such, the Permittee shall allow IDEM, OAQ, U.S. EPA, or an authorized representative to perform the following:

- (a) Enter upon the Permittee's premises where a Part 70 source is located, or emissions related activity is conducted, or where records must be kept under the conditions of this permit;
- (b) Have access to and copy any records that must be kept under the conditions of this permit;
- (c) Inspect any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under this permit;
- (d) Sample or monitor substances or parameters for the purpose of assuring compliance with this permit or applicable requirements; and
- (e) Utilize any photographic, recording, testing, monitoring, or other equipment for the purpose of assuring compliance with this permit or applicable requirements.

**B.23 Transfer of Ownership or Operational Control [326 IAC 2-7-11]**

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- (a) The Permittee must comply with the requirements of 326 IAC 2-7-11 whenever the Permittee seeks to change the ownership or operational control of the source and no other change in the permit is necessary.
- (b) Any application requesting a change in the ownership or operational control of the source shall contain a written agreement containing a specific date for transfer of permit responsibility, coverage and liability between the current and new Permittee. The application shall be submitted to:  
  
Indiana Department of Environmental Management  
Permits Branch, Office of Air Quality  
100 North Senate Avenue, P.O. Box 6015  
Indianapolis, Indiana 46206-6015  
  
The application which shall be submitted by the Permittee does require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).
- (c) The Permittee may implement administrative amendment changes addressed in the request for an administrative amendment immediately upon submittal of the request. [326 IAC 2-7-11(c)(3)]

**B.24 Annual Fee Payment [326 IAC 2-7-19] [326 IAC 2-7-5(7)]**

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- (a) The Permittee shall pay annual fees to IDEM, OAQ, within thirty (30) calendar days of receipt of a billing. Pursuant to 326 IAC 2-7-19(b), if the Permittee does not receive a bill from IDEM, OAQ, the applicable fee is due April 1 of each year.
- (b) Except as provided in 326 IAC 2-7-19(e), failure to pay may result in administrative enforcement action or revocation of this permit.
- (c) The Permittee may call the following telephone numbers: 1-800-451-6027 or 317-233-0425 (ask for OAQ, Technical Support and Modeling Section), to determine the appropriate permit fee.

## SECTION C

## SOURCE OPERATION CONDITIONS

Entire Source

### Emission Limitations and Standards [326 IAC 2-7-5(1)]

#### C.1 Opacity [326 IAC 5-1]

Pursuant to 326 IAC 5-1-2 (Opacity Limitations), except as provided in 326 IAC 5-1-3 (Temporary Alternative Opacity Limitations), opacity shall meet the following, unless otherwise stated in this permit:

- (a) Opacity shall not exceed an average of forty percent (40%) in any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.
- (b) Opacity shall not exceed sixty percent (60%) for more than a cumulative total of fifteen (15) minutes (sixty (60) readings as measured according to 40 CFR 60, Appendix A, Method 9 or fifteen (15) one (1) minute nonoverlapping integrated averages for a continuous opacity monitor) in a six (6) hour period.

#### C.2 Open Burning [326 IAC 4-1] [IC 13-17-9]

The Permittee shall not open burn any material except as provided in 326 IAC 4-1-3, 326 IAC 4-1-4 or 326 IAC 4-1-6. The previous sentence notwithstanding, the Permittee may open burn in accordance with an open burning approval issued by the Commissioner under 326 IAC 4-1-4.1. 326 IAC 4-1-3 (a)(2)(A) and (B) are not federally enforceable.

#### C.3 Incineration [326 IAC 4-2] [326 IAC 9-1-2]

The Permittee shall not operate an incinerator or incinerate any waste or refuse except as provided in 326 IAC 4-2 and 326 IAC 9-1-2. 326 IAC 9-1-2 is not federally enforceable.

#### C.4 Fugitive Dust Emissions [326 IAC 6-4]

The Permittee shall not allow fugitive dust to escape beyond the property line or boundaries of the property, right-of-way, or easement on which the source is located, in a manner that would violate 326 IAC 6-4 (Fugitive Dust Emissions). 326 IAC 6-4-2(4) is not federally enforceable.

#### C.5 Operation of Equipment [326 IAC 2-7-6(6)]

Except as otherwise provided by statute or rule, or in this permit, all air pollution control equipment listed in this permit and used to comply with an applicable requirement shall be operated at all times that the emission units vented to the control equipment are in operation.

#### C.6 Stack Height [326 IAC 1-7]

The Permittee shall comply with the applicable provisions of 326 IAC 1-7 (Stack Height Provisions), for all exhaust stacks through which a potential (before controls) of twenty-five (25) tons per year or more of particulate matter or sulfur dioxide is emitted. The provisions of 326 IAC 1-7-2, 326 IAC 1-7-3(c) and (d), 326 IAC 1-7-4(d), (e), and (f), and 326 IAC 1-7-5(d) are not federally enforceable.

#### C.7 Asbestos Abatement Projects [326 IAC 14-10] [326 IAC 18] [40 CFR 61, Subpart M]

- (a) Notification requirements apply to each owner or operator. If the combined amount of regulated asbestos containing material (RACM) to be stripped, removed or disturbed is at least 260 linear feet on pipes or 160 square feet on other facility components, or at least thirty-five (35) cubic feet on all facility components, then the notification requirements of 326 IAC 14-10-3 are

mandatory. All demolition projects require notification whether or not asbestos is present.

- (b) The Permittee shall ensure that a written notification is sent on a form provided by the Commissioner at least ten (10) working days before asbestos stripping or removal work or before demolition begins, per 326 IAC 14-10-3, and shall update such notice as necessary, including, but not limited to the following:
  - (1) When the amount of affected asbestos containing material increases or decreases by at least twenty percent (20%); or
  - (2) If there is a change in the following:
    - (A) Asbestos removal or demolition start date;
    - (B) Removal or demolition contractor; or
    - (C) Waste disposal site.
- (c) The Permittee shall ensure that the notice is postmarked or delivered according to the guidelines set forth in 326 IAC 14-10-3(2).
- (d) The notice to be submitted shall include the information enumerated in 326 IAC 14-10-3(3).

All required notifications shall be submitted to:

Indiana Department of Environmental Management  
Asbestos Section, Office of Air Quality  
100 North Senate Avenue, P.O. Box 6015  
Indianapolis, Indiana 46206-6015

The notice shall include a signed certification from the owner or operator that the information provided in this notification is correct and that only Indiana licensed workers and project supervisors will be used to implement the asbestos removal project. The notifications do not require a certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

- (e) **Procedures for Asbestos Emission Control**  
The Permittee shall comply with the applicable emission control procedures in 326 IAC 14-10-4 and 40 CFR 61.145(c). Per 326 IAC 14-10-4, emission control requirements are applicable for any removal or disturbance of RACM greater than three (3) linear feet on pipes or three (3) square feet on any other facility components or a total of at least 0.75 cubic feet on all facility components.
- (f) **Indiana Accredited Asbestos Inspector**  
The Permittee shall comply with 326 IAC 14-10-1(a) that requires the owner or operator, prior to a renovation/demolition, to use an Indiana Accredited Asbestos Inspector to thoroughly inspect the affected portion of the facility for the presence of asbestos. The requirement that the inspector be accredited, pursuant to the provisions of 40 CFR 61, Subpart M, is federally enforceable.

#### **Testing Requirements [326 IAC 2-7-6(1)]**

**C.8 Performance Testing [326 IAC 3-6]**

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- (a) All testing shall be performed according to the provisions of 326 IAC 3-6 (Source Sampling Procedures), except as provided elsewhere in this permit, utilizing any applicable procedures and analysis methods specified in 40 CFR 51, 40 CFR 60, 40 CFR 61, 40 CFR 63, 40 CFR 75, or other procedures approved by IDEM, OAQ.

A test protocol, except as provided elsewhere in this permit, shall be submitted to:

Indiana Department of Environmental Management  
Compliance Data Section, Office of Air Quality  
100 North Senate Avenue, P. O. Box 6015  
Indianapolis, Indiana 46206-6015

no later than thirty-five (35) days prior to the intended test date. The protocol submitted by the Permittee does not require certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

- (b) The Permittee shall notify IDEM, OAQ of the actual test date at least fourteen (14) days prior to the actual test date. The notification submitted by the Permittee does not require certification by the "responsible official" as defined by 326 IAC 2-7-1(34).
- (c) Pursuant to 326 IAC 3-6-4(b), all test reports must be received by IDEM, OAQ not later than forty-five (45) days after the completion of the testing. An extension may be granted by IDEM, OAQ, if the source submits to IDEM, OAQ, a reasonable written explanation not later than five (5) days prior to the end of the initial forty-five (45) day period.

**Compliance Requirements [326 IAC 2-1.1-11]**

**C.9 Compliance Requirements [326 IAC 2-1.1-11]**

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The commissioner may require stack testing, monitoring, or reporting at any time to assure compliance with all applicable requirements. Any monitoring or testing shall be performed in accordance with 326 IAC 3 or other methods approved by the commissioner or the U. S. EPA.

**Compliance Monitoring Requirements [326 IAC 2-7-5(1)] [326 IAC 2-7-6(1)]**

**C.10 Compliance Monitoring [326 IAC 2-7-5(3)] [326 IAC 2-7-6(1)]**

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Unless otherwise specified in this permit, all monitoring and record keeping requirements not already legally required shall be implemented within ninety (90) days of permit issuance. If required by Section D, the Permittee shall be responsible for installing any necessary equipment and initiating any required monitoring related to that equipment. If due to circumstances beyond its control, that equipment cannot be installed and operated within ninety (90) days, the Permittee may extend the compliance schedule related to the equipment for an additional ninety (90) days provided the Permittee notifies:

Indiana Department of Environmental Management  
Compliance Data Section, Office of Air Quality  
100 North Senate Avenue, P. O. Box 6015  
Indianapolis, Indiana 46206-6015

in writing, prior to the end of the initial ninety (90) day compliance schedule, with full justification of the reasons for the inability to meet this date.

The notification which shall be submitted by the Permittee does require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

Unless otherwise specified in the approval for the new emission unit(s), compliance monitoring for new emission units or emission units added through a source modification shall be implemented when operation begins.

**C.11 Maintenance of Emission Monitoring Equipment [326 IAC 2-7-5(3)(A)(iii)]**

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- (a) In the event that a breakdown of the emission monitoring equipment occurs, a record shall be made of the times and reasons of the breakdown and efforts made to correct the problem. To the extent practicable, supplemental or intermittent monitoring of the parameter should be implemented at intervals no less frequent than required in Section D of this permit until such time as the monitoring equipment is back in operation. In the case of continuous monitoring, supplemental or intermittent monitoring of the parameter should be implemented at intervals as required in Section D until such time as the continuous monitor is back in operation.
- (b) The Permittee shall install, calibrate, quality assure, maintain, and operate all necessary monitors and related equipment. In addition, prompt corrective action shall be initiated whenever indicated.

**C.12 Monitoring Methods [326 IAC 3] [40 CFR 60] [40 CFR 63]**

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Any monitoring or testing required by Section D of this permit shall be performed according to the provisions of 326 IAC 3, 40 CFR 60, Appendix A, 40 CFR 60 Appendix B, 40 CFR 63, or other approved methods as specified in this permit.

**C.13 Pressure Gauge and Other Instrument Specifications [326 IAC. 2-1.1-11] [326 IAC 2-7-5(3)] [326 IAC 2-7-6(1)]**

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- (a) Whenever a condition in this permit requires the measurement of pressure drop across any part of the unit or its control device, the gauge employed shall have a scale such that the expected normal reading shall be no less than twenty percent (20%) of full scale and be accurate within plus or minus two percent (  $\pm 2\%$  ) of full scale reading.
- (b) Whenever a condition in this permit requires the measurement of a temperature or flow rate, the instrument employed shall have a scale such that the expected normal reading shall be no less than twenty percent (20%) of full scale and be accurate within plus or minus two percent (  $\pm 2\%$  ) of full scale reading.
- (c) The Preventive Maintenance Plan for the pH meter shall include calibration using known standards. The frequency of calibration shall be adjusted such that the typical error found at calibration is less than one pH point.
- (d) The Permittee may request the IDEM, OAQ approve the use of a pressure gauge or other instrument that does not meet the above specifications provided the Permittee can demonstrate an alternative pressure gauge or other instrument specification will adequately ensure compliance with permit conditions requiring the measurement of pressure drop or other parameters.

**Corrective Actions and Response Steps [326 IAC 2-7-5] [326 IAC 2-7-6]**

**C.14 Emergency Reduction Plans [326 IAC 1-5-2] [326 IAC 1-5-3]**

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Pursuant to 326 IAC 1-5-2 (Emergency Reduction Plans; Submission):

- (a) The Permittee prepared and submitted written emergency reduction plans (ERPs) consistent with safe operating procedures on September 14, 1996.
- (b) If the ERP is disapproved by IDEM, OAQ, the Permittee shall have an additional thirty (30) days to resolve the differences and submit an approvable ERP.
- (c) Upon direct notification by IDEM, OAQ, that a specific air pollution episode level is in effect, the Permittee shall immediately put into effect the actions stipulated in the approved ERP for the appropriate episode level. [326 IAC 1-5-3]

**C.15 Risk Management Plan [326 IAC 2-7-5(12)] [40 CFR 68.215]**

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If a regulated substance, subject to 40 CFR 68, is present at a source in more than a threshold quantity, 40 CFR 68 is an applicable requirement and the Permittee shall submit:

- (a) A compliance schedule for meeting the requirements of 40 CFR 68; or
- (b) As a part of the annual compliance certification submitted under 326 IAC 2-7-6(5), a certification statement that the source is in compliance with all the requirements of 40 CFR 68, including the registration and submission of a Risk Management Plan (RMP).

All documents submitted pursuant to this condition shall include the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

**C.16 Compliance Response Plan - Preparation, Implementation, Records, and Reports [326 IAC 2-7-5] [326 IAC 2-7-6]**

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- (a) The Permittee is required to prepare a Compliance Response Plan (CRP) for each compliance monitoring condition of this permit. A CRP shall be submitted to IDEM, OAQ upon request. The CRP shall be prepared within ninety (90) days after issuance of this permit by the Permittee, supplemented from time to time by the Permittee, maintained on site, and comprised of:
  - (1) Reasonable response steps that may be implemented in the event that a response step is needed pursuant to the requirements of Section D of this permit; and an expected timeframe for taking reasonable response steps.
  - (2) If, at any time, the Permittee takes reasonable response steps that are not set forth in the Permittee's current Compliance Response Plan and the Permittee documents such response in accordance with subsection (e) below, the Permittee shall amend its Compliance Response Plan to include such response steps taken.
- (b) For each compliance monitoring condition of this permit, reasonable response steps shall be taken when indicated by the provisions of that compliance monitoring condition as follows:
  - (1) Reasonable response steps shall be taken as set forth in the Permittee's current Compliance Response Plan; or
  - (2) If none of the reasonable response steps listed in the Compliance Response Plan is applicable or responsive to the excursion, the Permittee shall devise and implement additional response steps as expeditiously as practical. Taking such additional response steps shall not be considered a deviation from this permit so long as the Permittee documents such response steps in accordance with this condition.



- (3) If the Permittee determines that additional response steps would necessitate that the emissions unit or control device be shut down, the IDEM, OAQ shall be promptly notified of the expected date of the shut down, the status of the applicable compliance monitoring parameter with respect to normal, and the results of the actions taken up to the time of notification.
  - (4) Failure to take reasonable response steps shall constitute a deviation of the permit.
- (c) The Permittee is not required to take any further response steps for any of the following reasons:
  - (1) A false reading occurs due to the malfunction of the monitoring equipment and prompt action was taken to correct the monitoring equipment.
  - (2) The Permittee has determined that the compliance monitoring parameters established in the permit conditions are technically inappropriate, has previously submitted a request for a minor permit modification to the permit, and such request has not been denied.
  - (3) An automatic measurement was taken when the process was not operating.
  - (4) The process has already returned or is returning to operating within "normal" parameters and no response steps are required.
- (d) When implementing reasonable steps in response to a compliance monitoring condition, if the Permittee determines that an exceedance of an emission limitation has occurred, the Permittee shall report such deviations pursuant to Section B-Deviations from Permit Requirements and Conditions.
- (e) The Permittee shall record all instances when response steps are taken. In the event of an emergency, the provisions of 326 IAC 2-7-16 (Emergency Provisions) requiring prompt corrective action to mitigate emissions shall prevail.
- (f) Except as otherwise provided by a rule or provided specifically in Section D, all monitoring as required in Section D shall be performed when the emission unit is operating, except for time necessary to perform quality assurance and maintenance activities.

**C.17 Actions Related to Noncompliance Demonstrated by a Stack Test [326 IAC 2-7-5][326 IAC 2-7-6]**

- (a) When the results of a stack test performed in conformance with Section C - Performance Testing, of this permit exceed the level specified in any condition of this permit, the Permittee shall take appropriate response actions. The Permittee shall submit a description of these response actions to IDEM, OAQ, within thirty (30) days of receipt of the test results. The Permittee shall take appropriate action to minimize excess emissions from the affected facility while the response actions are being implemented.
- (b) A retest to demonstrate compliance shall be performed within one hundred twenty (120) days of receipt of the original test results. Should the Permittee demonstrate to IDEM, OAQ that retesting in one-hundred and twenty (120) days is not practicable, IDEM, OAQ may extend the retesting deadline.
- (c) IDEM, OAQ reserves the authority to take any actions allowed under law in response to

noncompliant stack tests.

The documents submitted pursuant to this condition do require the certification by the “responsible official” as defined by 326 IAC 2-7-1(34).

**Record Keeping and Reporting Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-19]**

**C.18 Emission Statement [326 IAC 2-7-5(3)(C)(iii)] [326 IAC 2-7-5(7)] [326 IAC 2-7-19(c)] [326 IAC 2-6]**

- (a) The Permittee shall submit an annual emission statement certified pursuant to the requirements of 326 IAC 2-6, that must be received by July 1 of each year and must comply with the minimum requirements specified in 326 IAC 2-6-4. The annual emission statement shall meet the following requirements:
- (1) Indicate estimated actual emissions of criteria pollutants from the source, in compliance with 326 IAC 2-6 (Emission Reporting);
  - (2) Indicate estimated actual emissions of other regulated pollutants (as defined by 326 IAC 2-7-1) from the source, for purposes of Part 70 fee assessment.
- (b) The annual emission statement covers the twelve (12) consecutive month time period starting January 1 and ending December 31. The annual emission statement must be submitted to:
- Indiana Department of Environmental Management  
Technical Support and Modeling Section, Office of Air Quality  
100 North Senate Avenue, P. O. Box 6015  
Indianapolis, Indiana 46206-6015
- The emission statement does require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).
- (c) The annual emission statement required by this permit shall be considered timely if the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAQ, on or before the date it is due.

**C.19 General Record Keeping Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-6]**

- (a) Records of all required data, reports and support information shall be retained for a period of at least five (5) years from the date of monitoring sample, measurement, report, or application. These records shall be kept at the source location for a minimum of three (3) years. The records may be stored elsewhere for the remaining two (2) years as long as they are available upon request. If the Commissioner makes a request for records to the Permittee, the Permittee shall furnish the records to the Commissioner within a reasonable time.
- (b) Unless otherwise specified in this permit, all record keeping requirements not already legally required shall be implemented within ninety (90) days of permit issuance.

**C.20 General Reporting Requirements [326 IAC 2-7-5(3)(C)] [326 IAC 2-1.1-11]**

- (a) The source shall submit the attached Quarterly Deviation and Compliance Monitoring Report or its equivalent. Any deviation from permit requirements, the date(s) of each deviation, the cause of the deviation, and the response steps taken must be reported. This report shall be submitted within thirty (30) days of the end of the reporting period. The Quarterly Deviation and Compliance Monitoring Report shall include the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).
- (b) The report required in (a) of this condition and reports required by conditions in Section D of this permit shall be submitted to:

Indiana Department of Environmental Management  
Compliance Data Section, Office of Air Quality  
100 North Senate Avenue, P. O. Box 6015  
Indianapolis, Indiana 46206-6015

- (c) Unless otherwise specified in this permit, any notice, report, or other submission required by this permit shall be considered timely if the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAQ, on or before the date it is due.
- (d) Unless otherwise specified in this permit, all reports required in Section D of this permit shall be submitted within thirty (30) days of the end of the reporting period. All reports do require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).
- (e) The first report shall cover the period commencing on the date of issuance of this permit and ending on the last day of the reporting period. Reporting periods are based on calendar years.

#### **Stratospheric Ozone Protection**

**C.21 Compliance with 40 CFR 82 and 326 IAC 22-1**

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Pursuant to 40 CFR 82 (Protection of Stratospheric Ozone), Subpart F, except as provided for motor vehicle air conditioners in Subpart B, the Permittee shall comply with the standards for recycling and emissions reduction:

- (a) Persons opening appliances for maintenance, service, repair, or disposal must comply with the required practices pursuant to 40 CFR 82.156.
- (b) Equipment used during the maintenance, service, repair, or disposal of appliances must comply with the standards for recycling and recovery equipment pursuant to 40 CFR 82.158.
- (c) Persons performing maintenance, service, repair, or disposal of appliances must be certified by an approved technician certification program pursuant to 40 CFR 82.161.

## SECTION D.1

## FACILITY OPERATION CONDITIONS

### Facility Description [326 IAC 2-7-5(15)]

- (a) Two (2) alternating cupolas, known as Unit ID 010, (only one (1) operates at a time) installed in 1960, each equipped with a venturi scrubber system, known as Unit ID VS#10, consisting of two (2) natural gas-fired afterburners with propane as a back-up fuel for CO control, rated at 8.0 million British thermal units per hour, each, one (1) quencher tank, one (1) venturi scrubber and demister, exhausted through Stack 010, capacity: 12.8 tons of metal per hour, each.
- (b) Three (3) electric induction melting furnaces (#2, #3, and #4), known as Unit ID 020, equipped with a baghouse, known as Unit ID DC#13, exhausted through Stack 013 or exhausted by overhead fans through Stacks 020 and 070, general exhausts, installed in 1972, capacity: 3.5 tons of metal per hour, each (baghouse does not have to be operated at all times).
- (c) One (1) electric induction melting furnace (#1), known as Unit ID 021, installed in 1996, equipped with a baghouse, known as Unit ID DC#13, exhausted through Stack 013, capacity: 4.8 tons of metal per hour (baghouse does not have to be operated at all times).
- (d) Seven (7) electric holding furnaces (40 ton and Group 3 through Group 8 electric holding furnaces) and hot metal transfer ladles, known as Unit ID 030, installed in 1960, exhausted through Stack 030, charging capacity: 23.3 tons of metal per hour, total.
- (e) One (1) electric holding furnace (1996) and hot metal transfer ladles, known as Unit ID 031, exhausted through Stack 031, installed in 1996, capacity: charging 4.8 tons of metal per hour.

(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

### Emission Limitations and Standards [326 IAC 2-7-5(1)]

#### D.1.1 Particulate Matter (PM) [326 IAC 6-1-14]

Pursuant to 326 IAC 6-1-14 (Nonattainment area particulate limitations: Wayne County), the allowable PM emission rate from the two (2) cupolas (Unit ID 010) shall not exceed:

- (a) 0.133 grains per dry standard cubic foot of outlet air, and
- (b) 51.5 tons per year.

#### D.1.2 Particulate Matter (PM) [326 IAC 6-1]

- (a) Pursuant to 326 IAC 6-1-2(e)(2), the particulate matter (PM) emissions from the three (3) electric induction melting furnaces (Unit ID 020) shall not exceed 0.07 grains per dry standard cubic foot for Stack 013, equivalent to 11.5 pounds per hour at a flow rate of 19,243 dry standard cubic feet per minute, each.
- (b) Pursuant to 326 IAC 6-1-2(e)(2), the particulate matter (PM) emissions from the electric induction melting furnace (Unit ID 021) shall not exceed 0.07 grains per dry standard cubic foot, equivalent to 11.5 pounds per hour at a flow rate of 19,243 dry standard cubic feet per minute.

- (c) Pursuant to 326 IAC 6-1-2(a), the particulate matter (PM) emissions from the seven (7) electric holding furnaces (Unit ID 030) shall not exceed 0.03 grains per dry standard cubic foot, total, equivalent to 4.98 pounds per hour at a flow rate of 19,356 dry standard cubic feet per minute.
- (d) Pursuant to 326 IAC 6-1-2(a), the particulate matter (PM) emissions from the electric holding furnace (Unit ID 031) shall not exceed 0.03 grains per dry standard cubic foot, equivalent to 1.00 pound per hour at a flow rate of 3,905 dry standard cubic feet per minute.

**D.1.3 PM<sub>10</sub> [326 IAC 2-2]**

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- (a) The PM<sub>10</sub> emissions from the electric induction melting furnace (Unit ID 021) shall not exceed 4.128 pounds per hour, and
- (b) The input of grey iron to the electric induction melting furnace (Unit ID 021) shall be limited to 31,392 tons per twelve (12) consecutive month period. Therefore, the requirements of 326 IAC 2-2 are not applicable.
- (c) The requirement from CP 177-6425-00004 issued November 12, 1996, Condition 7 that stated that the input of grey iron to the electric induction melting furnace (Unit ID 021) shall be limited to 2,616 tons per month pursuant to 326 IAC 2-2 has been replaced by a twelve (12) consecutive month period limit. Therefore, Condition 7 of CP 177-6425 is hereby rescinded.

**D.1.4 Preventive Maintenance Plan [326 IAC 2-7-5(13)]**

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A Preventive Maintenance Plan, in accordance with Section B - Preventive Maintenance Plan, of this permit, is required for the two (2) cupolas and their control devices.

**Compliance Determination Requirements**

**D.1.5 Testing Requirements [326 IAC 2-7-6(1),(6)] [326 IAC 2-1.1-11]**

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Within 180 days after issuance of this permit or within two and a half (2.5) years of the last valid stack test, whichever is later, in order to demonstrate compliance with Condition D.1.1, the Permittee shall perform PM testing of the exhaust stack serving the two (2) cupolas (Stack 010) utilizing methods as approved by the Commissioner. This test shall be repeated at least once every two and a half (2.5) years from the date of this valid compliance demonstration. Testing shall be conducted in accordance with Section C- Performance Testing.

**D.1.6 Particulate Matter (PM)**

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In order to comply with Condition D.1.1, the venturi scrubber system, known as Unit ID VS#10, consisting of two (2) afterburners for CO, one (1) quencher tank, one (1) venturi scrubber and demister for PM control shall be in operation at all times when either of the two (2) cupolas are in operation and exhausting to the outside atmosphere.

**Compliance Monitoring Requirements [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]**

**D.1.7 Visible Emissions and Turbidity Notations**

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- (a) Visible emission notations of the cupola stack exhaust (Stack 010) shall be performed once per shift during normal daylight operations when exhausting to the atmosphere. A trained employee shall record whether emissions are normal or abnormal.
- (b) In lieu of performing visible emissions notations of the four (4) electric induction furnaces exhaust, the Permittee may operate a baghouse to control emissions from the four (4) electric induction furnaces. Visible emission notations of the four (4) electric induction furnaces

exhaust (Stacks 020 and 070, general exhausts) shall be performed once per shift during normal daylight operations when exhausting to the atmosphere if the baghouse, known as DC#13 is *not* operating. A trained employee shall record whether emissions are normal or abnormal.

- (c) Visible observations of the charge doors for smoke emissions shall be performed once per shift. A trained employee shall record whether emissions are normal or abnormal.
- (d) Turbidity observations of the scrubber water shall be performed once per work day. A trained employee shall record whether observations are normal or abnormal.
- (e) For processes operated continuously, "normal" means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not counting startup or shut down time.
- (f) In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions.
- (g) A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process.
- (h) The Compliance Response Plan for this unit shall contain troubleshooting contingency and response steps for when an abnormal emission is observed. An observation of an abnormal visible emission notation or turbidity observation is not a deviation from this permit. Failure to take response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports, shall be considered a deviation of this permit.

#### D.1.8 Afterburners Parametric Monitoring

- (a) A continuous monitoring system shall be calibrated, maintained, and operated on the two (2) afterburners for measuring operating temperature. The output of this system shall be recorded, and that temperature shall be greater than or equal to the normal temperature used to demonstrate compliance during the most recent compliance stack test, or the Permittee shall take reasonable response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports. A temperature reading that is outside the normal range is not a deviation from this permit. Failure to take response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports, shall be considered a deviation of this permit.
- (b) The instruments used for determining the temperature shall comply with Section C - Pressure Gauge Specifications and Other Instruments, of this permit, shall be subject to approval by IDEM, OAQ, and shall be calibrated at least once every twelve (12) months.

#### D.1.9 Scrubber Parametric Monitoring

- (a) The Permittee shall record the total static pressure drop across the venturi scrubber used in conjunction with the two (2) alternating cupolas, known as Unit ID 010, (only one (1) operates at a time) at least once per shift when either of the cupolas is in operation when venting to the atmosphere. When for any one (1) reading, the pressure drop across the scrubber is below a minimum of 20.0 inches of water or a minimum established during the latest stack test, the Permittee shall take reasonable response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports. A pressure reading that

is less than the above mentioned minimum is not a deviation from this permit. Failure to take response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports, shall be considered a deviation of this permit.

- (b) The fan speed and/or motor amperage shall be observed at least once per work day when the two (2) afterburners are in operation. When for any one (1) reading, the fan speed and/or motor amperage are outside the normal range or the range of fan speeds and/or motor amperages established during the latest stack test, the Permittee shall take reasonable response steps in accordance with Section C- Compliance Response Plan- Preparation, Implementation, Records, and Reports. A fan speed and/or motor amperage reading that is outside the normal range is not a deviation from this permit. Failure to take response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports, shall be considered a deviation of this permit.
- (c) The instrument used for determining the pressure, fan speed and motor amperage shall comply with Section C - Pressure Gauge Specifications and Other Instruments, of this permit, shall be subject to approval by IDEM, OAQ, and shall be calibrated at least once every twelve (12) months.

#### D.1.10 pH of the Scrubbing Liquor

The Permittee shall record the pH of the scrubbing liquor used in conjunction with the two (2) alternating cupolas, known as Unit ID 010, (only one (1) operates at a time) at least once per shift when the cupola is in operation when venting to the atmosphere. When for any one (1) reading, the pH is outside the normal range of 6.5 and 9.0 or the range of pH established during the latest stack test, the Permittee shall take reasonable response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports. A pH reading that is outside the above mentioned range is not a deviation from this permit. Failure to take response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports, shall be considered a deviation of this permit.

The instrument used for determining the pH shall comply with Section C - Pressure Gauge Specifications and Other Instruments, of this permit, shall be subject to approval by IDEM, OAQ, and shall be calibrated at least once every twelve (12) months.

#### D.1.11 Venturi Scrubber Flow Rate

The Permittee shall continuously record the scrubbing liquor (water) flow rate across the venturi scrubber controlling the cupola when the cupola is in operation. When for any one (1) reading, the flow rate for the scrubbing liquor shall be no less than a minimum of 75 gallons of water per minute or a minimum flow rate established during the latest stack test, the Permittee shall take reasonable response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports. A flow rate reading that is less than the minimum is not a deviation from this permit. Failure to take response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports, shall be considered a deviation of this permit.

The instrument used for determining the flow rate shall comply with Section C - Pressure Gauge Specifications and Other Instruments, of this permit, shall be subject to approval by IDEM, OAQ, and shall be calibrated at least once every twelve (12) months.

#### D.1.12 Scrubber and Demister Inspection

An inspection shall be performed each calendar quarter of the scrubber and demister. Defective



scrubber and/or demister part(s) shall be replaced. A record shall be kept of the results of the inspection.

#### D.1.13 Failure Detection

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In the event that a scrubber and/or demister failure has been observed:

Failed units and the associated process will be shut down immediately until the failed units have been repaired or replaced. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions).

### **Record Keeping and Reporting Requirement [326 IAC 2-7-5(3)] [326 IAC 2-7-19]**

#### D.1.14 Record Keeping Requirements

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- (a) To document compliance with Condition D.1.7(a), the Permittee shall maintain records of visible emission notations of the cupola stack exhaust once per shift.
- (b) To document compliance with Conditions D.1.2(a), D.1.2(b) and D.1.7(b), the Permittee shall maintain records of visible emission notations of the four (4) electric induction furnaces stack exhaust once per shift or maintain records documenting the operation of a baghouse for the four (4) electric induction furnaces exhaust.
- (c) To document compliance with Condition D.1.3, the Permittee shall maintain monthly records of grey iron input to the electric induction melting furnace (Unit ID 021).
- (d) To document compliance with Condition D.1.7(c), the Permittee shall maintain records of visible emissions of the charge doors once per shift.
- (e) To document compliance with Condition D.1.7(d), the Permittee shall maintain records of scrubber water turbidity once per work day.
- (f) To document compliance with Condition D.1.8, the Permittee shall maintain records of temperature of the afterburners continuously.
- (g) To document compliance with Condition D.1.9, the Permittee shall maintain records of pressure drop across the venturi scrubber once per shift and the fan speed and/or motor amperage once per work day.
- (h) To document compliance with Condition D.1.10, the Permittee shall maintain records of scrubber water pH once per shift.
- (i) To document compliance with Condition D.1.11, the Permittee shall maintain records of scrubber water flow rate continuously.
- (j) To document compliance with Condition D.1.12, the Permittee shall maintain records of the results of the inspections required under Condition D.1.12 and the dates the vents are re-directed.
- (k) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

#### D.1.15 Reporting Requirements

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A quarterly summary of the monthly information to document compliance with the monthly furnace charge input limit in Condition D.1.3 shall be submitted to the address listed in Section C - General

Reporting Requirements, of this permit, using the reporting forms located at the end of this permit, or their equivalent, within thirty (30) days after the end of the quarter being reported. The report submitted by the Permittee does require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

## SECTION D.2

## FACILITY OPERATION CONDITIONS

### Facility Description [326 IAC 2-7-5(15)]

- (f) One (1) natural gas indirect-fired burner using propane as a back-up fuel supplying hot blast air to cupola, known as Unit ID 040, exhausted through Stack 040, installed in 1999, capacity: 14.0 million British thermal units per hour.

(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

### Emission Limitations and Standards [326 IAC 2-7-5(1)]

#### D.2.1 Particulate Matter (PM) [326 IAC 6-1]

Pursuant to 326 IAC 6-1-2(a), the particulate matter (PM) emissions from the natural gas indirect-fired burner using propane as a back-up fuel supplying hot blast air to cupola (Unit ID 040) shall not exceed 0.03 grains per dry standard cubic foot, equivalent to 0.288 pounds per hour at a flow rate of 1,120 dry standard cubic feet per minute.

### Compliance Determination Requirements

#### D.2.2 Fuel Type

The burner shall only be fired with natural gas or propane as a back-up fuel.

### **SECTION D.3**

### **FACILITY OPERATION CONDITIONS**

**Facility Description [326 IAC 2-7-5(15)]**

- (g) One (1) tundish ladle for Group 3 spinner machines and two (2) back-up tundish ladles for magnesium inoculation, known as Unit ID 050, exhausted through vent Stack 050a and through roof ventilation Stack 050b, installed in 1960, capacity: 4 tons of iron treated per hour.
- (h) One (1) cupola charge handling operation, known as Unit ID 060, exhausted through Stack 060, installed in 1960, capacity: 12.8 tons of metal per hour.
- (i) One (1) electric furnace charge handling operation, known as Unit ID 070, exhausted through Stack 070, installed in 1972, capacity: 10 tons of metal per hour.
- (j) One (1) direct-fired scrap charge pre-heater, known as Unit ID 080, equipped with a baghouse, known as Unit ID DC#13, exhausted through Stack 013, installed in 1972, capacity: 10 tons of metal per hour (baghouse does not have to be operated at all times).
- (k) Seven (7) centrifugal casting operations, known as Unit ID 090, consisting of three (3) long tube spinners (Group 1), thirty-three (33) regular spinners (Groups 3 through Group 6 and Group 8), equipped with six (6) baghouses, known as DC#1, DC#2A, DC#3, DC#4, and DC#7 & DC#8, exhausting through Stacks 090h, 090g, 090a, 090b, and 090e & 090f, respectively, and one (1) rotary turntable (Group 7), equipped with two (2) baghouses, known as DC#5 & DC#6, exhausting through Stacks 090c and 090d, installed in 1960, capacity: 40 tons of metal per hour, total.
- (l) One (1) longtube 92-inch centrifugal casting machine (spinner #18) (Group 1), known as Unit ID 090, equipped with a baghouse, known as DC#1, exhausting through Stack 090h, installed in 2001, capacity: 1.70 tons of metal per hour.
- (m) Four (4) longtube 60-inch centrifugal casting machines (spinners #41, #43, #45, and #47) (Group 4), Unit ID 090, equipped with a baghouse, known as DC#3, exhausting through Stack 090a, installed in 2001, capacity: 1.11 tons of metal per hour each.
- (n) Three (3) shot blasters, capacity: 30 tons of metal cleaned per hour, total, consisting of:
  - (1) One (1) shot blaster [one (1) hanging conveyORIZED (cleaning mill #1)], known as Unit ID 100, equipped with a baghouse, known as DC#2, equipped with a bag leak detection system, exhausted through Stack 100a, installed prior to 1969.
  - (2) Two (2) rotoblaster (cleaning mill #3 and #5), known as Unit ID 100, equipped with interchangeable baghouses, known as DC#10 and DC#9, each equipped with a bag leak detection system, exhausted through Stacks 100b and 100c, installed in 1968 and 1978, respectively.
- (o) One (1) pangborn ES-2029-1\S000203 rotoblast cabinet (cleaning mill #7), known as Unit ID 100, equipped with an interchangeable baghouse, known as DC#10 or DC#9, each equipped with a bag leak detection system, exhausting through Stack 100b or 100c, installed in 2001, capacity: 13.0 tons of metal per hour, blast rate 80.75 tons of cast steel shot per hour.

(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

### **Emission Limitations and Standards [326 IAC 2-7-5(1)]**

#### **D.3.1 Particulate Matter (PM) [326 IAC 6-1]**

- 
- (a) Pursuant to 326 IAC 6-1-2(a), the particulate matter (PM) emissions from the one (1) tundish ladle for Group 3 spinner machines and two (2) back-up tundish ladles for magnesium inoculation (Unit ID 050) shall not exceed 0.03 grains per dry standard cubic foot equivalent to 0.742 pounds per hour total at a flow rate of 2,886 dry standard cubic feet per minute for Stack 050a.
  - (b) Pursuant to 326 IAC 6-1-2(a), the particulate matter (PM) emissions from the one (1) tundish ladle for Group 3 spinner machines and two (2) back-up tundish ladles for magnesium inoculation (Unit ID 050) shall not exceed 0.03 grains per dry standard cubic foot equivalent to 10.4 pounds per hour total at a flow rate of 40,410 dry standard cubic feet per minute for Stack 050b.
  - (c) Pursuant to 326 IAC 6-1-2(a), the particulate matter (PM) emissions from the one (1) cupola charge handling operation (Unit ID 060) shall not exceed 0.03 grains per dry standard cubic foot, equivalent to 4.95 pounds per hour at a flow rate of 19,243 dry standard cubic feet per minute.
  - (d) Pursuant to 326 IAC 6-1-2(a), the particulate matter (PM) emissions from one (1) electric furnace charge handling operation (Unit ID 070) shall not exceed 0.03 grains per dry standard cubic foot, equivalent to 4.95 pounds per hour at a flow rate of 19,243 dry standard cubic feet per minute.
  - (e) Pursuant to 326 IAC 6-1-2(a), the particulate matter (PM) emissions from the direct-fired scrap charge pre-heater (Unit ID 080) shall not exceed 0.03 grains per dry standard cubic foot, equivalent to 4.38 pounds per hour at a flow rate of 17,035 dry standard cubic feet per minute.
  - (f) Pursuant to 326 IAC 6-1-2(a), the particulate matter (PM) emissions from the twelve (12) centrifugal casting operations (Unit ID 090) consisting of four (4) long tube spinners (Group 1), thirty-three (33) regular spinners (Groups 3 through Group 6 and Group 8) and four (4) long tube spinners (Group 4) and one (1) rotary turntable (Group 7), shall not exceed 0.03 grains per dry standard cubic foot each for Stacks 090a through 090h, equivalent to 4.77, 0.835, 0.740, 0.740, 0.835, 0.740, 0.740 and 0.883 pounds per hour at flow rates of 18,555, 3,247, 2,876, 2,876, 3,247, 2,876, 2,876 and 3,433 dry standard cubic feet per minute for Stacks 090a through 090h, respectively.
  - (g) Pursuant to 326 IAC 6-1-2(a), the particulate matter (PM) emissions from the four (4) shot blasters [one (1) hanging conveyorized (cleaning mill #1) and three (3) rotoblaster (cleaning mills #3, #5 and #7)] (Unit ID 100) shall not exceed 0.03 grains per dry standard cubic foot, each, equivalent to:
    - (1) 3.96 pounds per hour at a flow rate of 15,394 dry standard cubic feet per minute each for Stacks 100a and 100b, and
    - (2) 1.98 pounds per hour at a flow rate of 7,697 dry standard cubic feet per minute for Stack 100c.

#### **D.3.2 Prevention of Significant Deterioration (PSD) [326 IAC 2-2]**

- 
- (a) The PM emissions from any two (2) of the three (3) cleaning mills #3, #5 or #7 exhausted

through Stack 100b shall not exceed 5.71 pounds of PM per hour.

- (b) The PM<sub>10</sub> emissions from any two (2) of the three (3) cleaning mills #3, #5 or #7 exhausted through Stack 100b shall not exceed 3.42 pounds of PM<sub>10</sub> per hour.
- (c) The PM emissions from the two (2) rotoblasts (cleaning mill #3 and #5) exhausted through Stack 100c shall not exceed 5.71 pounds of PM per hour.
- (d) The PM<sub>10</sub> emissions from the two (2) rotoblasts (cleaning mill #3 and #5) exhausted through Stack 100c shall not exceed 3.42 pounds of PM<sub>10</sub> per hour.
- (e) Cleaning mill #3 is not subject to any PM or PM<sub>10</sub> emission limits to render PSD not applicable when operated without cleaning mills #5 or #7 since cleaning mill #3 was installed in 1968 prior to applicability date of 326 IAC 2-2 (Prevention of Significant Deterioration (PSD)).

Compliance with the above PM and PM<sub>10</sub> emission limits renders the requirements of 326 IAC 2-2 not applicable.

#### D.3.3 Preventive Maintenance Plan [326 IAC 2-7-5(13)]

A Preventive Maintenance Plan, in accordance with Section B - Preventive Maintenance Plan, of this permit, is required for baghouses DC#1, #2, #2A, #3, #4, #5, #6, #7, #8, #9, and #10 associated with the twelve (12) centrifugal casting operations, known as Unit ID 090 and the four (4) shot blasters [one (1) hanging conveyorized (cleaning mill #1) and three (3) rotoblasts (cleaning mill #3, #5 and #7)], known as Unit ID 100.

### Compliance Determination Requirements

#### D.3.4 Testing Requirements [326 IAC 2-7-6(1),(6)] [326 IAC 2-1.1-11]

- (a) Within 36 months after issuance of this permit, in order to demonstrate compliance with Conditions D.3.1(g) and D.3.2, the Permittee shall perform PM and PM<sub>10</sub> testing of the exhaust stacks serving two (2) of the three (3) shot blasters (Stack 100a or b and c) utilizing methods as approved by the Commissioner. This test shall be repeated at least once every five (5) years from the date of this valid compliance demonstration. PM<sub>10</sub> includes filterable and condensable PM<sub>10</sub>. Testing shall be conducted in accordance with Section C- Performance Testing.
- (b) To demonstrate compliance with Condition D.3.1(f), a compliance stack test of PM of cleaning mill #7 shall be performed between January 2006 and November 7, 2006, which corresponds to five (5) years since the latest valid stack test, utilizing methods as approved by the Commissioner. This test shall be repeated at least once every five (5) years from the date of this valid compliance demonstration. Testing shall be conducted in accordance with Section C- Performance Testing. of cleaning mill #7 of utilizing methods as approved by the Commissioner. This test shall be repeated at least once every five (5) years from the date of this valid compliance demonstration. Testing shall be conducted in accordance with Section C- Performance Testing.
- (c) Within 180 days after issuance of this permit, in order to demonstrate compliance with Condition D.3.1(a), the Permittee shall perform PM testing of the exhaust stack 050 serving the one (1) tundish ladle for Group 3 spinner machines and two (2) back-up tundish ladles for magnesium inoculation, known as Unit ID 050, utilizing methods as approved by the Commissioner. Testing shall be conducted in accordance with Section C- Performance Testing.





**D.3.5 Particulate Matter (PM)**

- (a) In order to comply with Condition D.3.1, the six (6) baghouses, known as DC#1, DC#2A, DC#3, DC#4, and DC#7 & DC#8, two (2) baghouses, known as DC#5 & DC#6, and/or the three (3) baghouses, known as DC#2, DC#10 and DC#9 for PM control shall be in operation at all times when the twelve (12) centrifugal casting operations, the one (1) rotary turntable (Group 7) and/or four (4) shot blasters [one (1) hanging conveyORIZED (cleaning mill #1) and three (3) rotoblaster (cleaning mills #3, #5 and #7)] are in operation and exhausting to the outside atmosphere.
- (b) In order to comply with Condition D.3.1(g):
  - (1) The three (3) cleaning mills (#3, #5 and #7) may be controlled by either baghouse, known as DC#9 or DC#10, and
  - (2) No more than two (2) of the three (3) cleaning mills (#3, #5 or #7) shall be controlled by either DC#9 or DC#10 at anytime.

**Compliance Monitoring Requirements [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]**

**D.3.6 Visible Emissions Notations**

- (a) Visible emission notations of the centrifugal casting stack exhausts (Stacks 090a through 090h) shall be performed once per shift during normal daylight operations when exhausting to the atmosphere. A trained employee shall record whether emissions are normal or abnormal.
- (b) For processes operated continuously, "normal" means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not counting startup or shut down time.
- (c) In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions.
- (d) A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process.
- (e) The Compliance Response Plan for this unit shall contain troubleshooting contingency and response steps for when an abnormal emission is observed. An observation of an abnormal visible emission notation is not a deviation from this permit. Failure to take response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports, shall be considered a deviation of this permit.

**D.3.7 Parametric Monitoring**

- (a) The Permittee shall record the total static pressure drop across each of the eight (8) baghouses, known as DC#1, DC#2A, DC#3, DC#4, DC#7 & DC#8, DC#5 and DC#6, controlling the centrifugal casting operations at least once per shift when casting is in operation. When for any one (1) reading, the pressure drop across each of the baghouses is outside the normal range of 2 to 8 inches of water or a range established during the latest stack test, the Permittee shall take reasonable response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports. A pressure reading that is outside the above mentioned range is not a deviation from this permit. Failure to take response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports, shall be considered a deviation of this permit.

- (b) The Permittee shall record the total static pressure drop across each of the three (3) baghouses, known as DC#2, DC#10 and DC#9 controlling the cleaning operations at least once per shift when any shot blaster is in operation. When for any one (1) reading, the pressure drop across each of the baghouses is outside the normal range of 2 to 8 inches of water for DC#2, DC#10 and DC#9 or a range established during the latest stack test, the Permittee shall take reasonable response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports. A pressure reading that is outside the above mentioned range is not a deviation from this permit. Failure to take response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports, shall be considered a deviation of this permit.
- (c) The instrument used for determining the pressure shall comply with Section C - Pressure Gauge and Other Instrument Specifications, of this permit, shall be subject to approval by IDEM, OAQ, and shall be calibrated at least once every twelve (12) months.

#### **D.3.8 Baghouse Inspections**

An inspection shall be performed each calendar quarter of all bags controlling the centrifugal casting operation when venting to the atmosphere. A baghouse inspection shall be performed within three (3) months of redirecting vents to the atmosphere and every three (3) months thereafter. Inspections are optional when venting to the indoors. All defective bags shall be replaced.

#### **D.3.9 Broken or Failed Bag Detection for Baghouses Without Bag Leak Detection Systems**

In the event that bag failure has been observed for the centrifugal casting operations (Unit ID 090):

- (a) For multi-compartment units, the affected compartments will be shut down immediately until the failed units have been repaired or replaced. Operations may continue only if there are no visible emissions or if the event qualifies as an emergency and the Permittee satisfies the emergency provisions of this permit (Section B- Emergency Provisions). Within eight (8) business hours of the determination of failure, response steps according to the timetable described in the Compliance Response Plan shall be initiated. For any failure with corresponding response steps and timetable not described in the Compliance Response Plan, response steps shall be devised within eight (8) business hours of discovery of the failure and shall include a timetable for completion. Failure to take response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports, shall be considered a deviation of this permit.
- (b) For single compartment baghouses, if failure is indicated by a significant drop in the baghouse's pressure readings with abnormal visible emissions or the failure is indicated by an opacity violation, or if bag failure is determined by other means, such as gas temperatures, flow rates, air infiltration, leaks, dust traces or triboflows, failed units and the associated process will be shut down immediately until the failed units have been repaired or replaced.

#### **D.3.10 Bag Leak Detection System**

The Permittee shall install and operate a continuous bag leak detection system for shot blaster stack exhausts (Stacks 100a through 100c). The bag leak detection system shall meet the following requirements:

- (a) The bag leak detection system must be certified by the manufacturer to be capable of detecting particulate matter emissions at concentrations of 0.005 grains per actual cubic foot or less.
- (b) The bag leak detection system must be equipped with a signal system that will indicate when

an increase in particulate loadings is detected over a preset level.

- (c) The bag leak detection system shall be installed and operated in a manner consistent with the manufacturer's written specifications and recommendations for installation, operation, and adjustment of the system.
- (d) The initial adjustment of the system shall, at a minimum, consist of establishing the baseline output by adjusting the sensitivity (range) and the averaging period of the device, and establishing the signal set points and the signal delay time.
- (e) In no event shall the sensitivity be increased by more than 100% or decreased by more than 50% over a 365-day period unless such adjustment follows a complete baghouse inspection which demonstrates that the baghouse is in good operating condition.
- (f) The bag detector must be installed downstream of the baghouse.
- (g) In the event that the bag leak detection system should malfunction, fail, or otherwise need repair, the Permittee shall perform visible emission notations of the shot blaster stack exhausts (Stacks 100a through 100c) once per shift during normal daylight operations when exhausting to the atmosphere until such time that the bag leak section system is repaired and functioning properly. A trained employee shall record whether emissions are normal or abnormal. Conditions D.3.6(b) through D.3.6(e) shall also become applicable during any period when visible emission notations are being performed in the alternative of operating the bag leak detection system.
- (h) The bag leak detection system shall be calibrated at least once per year.

#### D.3.11 Activated Bag Leak Detection System Signal

In the event that the bag leak detection system signal is activated, the Permittee shall immediately confirm whether or not the signal has been activated by a leak as follows:

- (a) The Permittee shall remove and examine the probe and then re-insert it. If the signal is erroneous, the bag leak detection system shall be reset.
- (b) If the signal is confirmed, the Permittee shall proceed as indicated in Condition D.3.9(a) for multi-compartment units or Condition D.3.9(b) for single compartment baghouses.
  - (1) For multi-compartment units, the affected compartments will be shut down immediately until the failed units have been repaired or replaced. Operations may continue only if there are no visible emissions or if the event qualifies as an emergency and the Permittee satisfies the emergency provisions of this permit (Section B- Emergency Provisions). Within eight (8) business hours of the determination of failure, response steps according to the timetable described in the Compliance Response Plan shall be initiated. For any failure with corresponding response steps and timetable not described in the Compliance Response Plan, response steps shall be devised within eight (8) business hours of discovery of the failure and shall include a timetable for completion. Failure to take response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports, shall be considered a deviation of this permit.
  - (2) For single compartment baghouses, if failure is indicated by a significant drop in the

baghouse's pressure readings with abnormal visible emissions or the failure is indicated by an opacity violation, or if bag failure is determined by other means, such as gas temperatures, flow rates, air infiltration, leaks, dust traces or triboflows, failed units and the associated process will be shut down immediately until the failed units have been repaired or replaced.

**Record Keeping and Reporting Requirement [326 IAC 2-7-5(3)] [326 IAC 2-7-19]**

**D.3.12 Record Keeping Requirements**

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- (a) To document compliance with Condition D.3.6,
  - (1) The Permittee shall maintain records of visible emission notations of the centrifugal casting exhausts once per shift.
  - (2) The Permittee shall maintain records of visible emission notations of the cleaning mills #1, #3, #5 and #7 (Stacks 100a - 100c) exhausts once per shift when the applicable bag leak detection system malfunctions, fails, or otherwise needs repair.
- (b) To document compliance with Condition D.3.7, the Permittee shall maintain records of the inlet and outlet differential static pressure during normal operation when venting to the atmosphere once per shift.
- (c) To document compliance with Condition D.3.8, the Permittee shall maintain records of the results of the inspections required under Condition D.3.8 and the dates the vents are redirected.
- (d) To document compliance with Condition D.3.11, the Permittee shall maintain records of the occurrences of all bag leak detection system alarms and the response steps.
- (e) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

## SECTION D.4

## FACILITY OPERATION CONDITIONS

### Facility Description [326 IAC 2-7-5(15)] Insignificant Activities

- (a) Degreasing operations that do not exceed 145 gallons per 12 months, except if subject to 326 IAC 20-6. (326 IAC 8-3-2 and 326 IAC 8-3-5)
- (b) Any of the following structural steel and bridge fabrication activities: Cutting 200,000 linear feet or less of one inch (1") plate or equivalent; using 80 tons or less of welding consumables. (326 IAC 6-1)
- (c) Trimmers that do not produce fugitive emissions and that are equipped with a dust collection or trim material recovery device such as a bag filter or cyclone. (326 IAC 6-1)
- (d) Conveyors as follows: Covered conveyors for coal or coke conveying of less than or equal to 360 tons per day; Covered conveyors for limestone conveying of less than or equal to 7,200 tons per day for sources other than mineral processing plants constructed after August 31, 1983. (326 IAC 6-1)
- (e) Grinding and machining operations controlled with fabric filters, scrubbers, mist collectors, wet collectors and electrostatic precipitators with a design grain loading of less than or equal to 0.03 grains per actual cubic foot and a gas flow rate less than or equal to 4,000 actual cubic feet per minute, including the following: deburring; buffing; polishing; abrasive blasting; and pneumatic conveying operations including the following:
  - One (1) wet liner machining lathing operation controlled by a baghouse dust collector with a gas flow rate of 2,000 actual cubic feet per minute. (326 IAC 6-1)
- (f) Iron manganese phosphating operation (Lubrite). (326 IAC 6-1)
- (g) One (1) CNC lathe machining operation, equipped with a baghouse, known as DC#12. (326 IAC 6-1)

(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

### Emission Limitations and Standards [326 IAC 2-7-5(1)]

#### D.4.1 Volatile Organic Compounds (VOC) [326 IAC 8-3-2]

Pursuant to 326 IAC 8-3-2 (Cold Cleaner Operations) for cold cleaning operations construction after January 1, 1980, the owner or operator shall:

- (a) Equip the cleaner with a cover;
- (b) Equip the cleaner with a facility for draining cleaned parts;
- (c) Close the degreaser cover whenever parts are not being handled in the cleaner;
- (d) Drain cleaned parts for at least fifteen (15) seconds or until dripping ceases;
- (e) Provide a permanent, conspicuous label summarizing the operation requirements;

- (f) Store waste solvent only in covered containers and not dispose of waste solvent or transfer it to another party, in such a manner that greater than twenty percent (20%) of the waste solvent (by weight) can evaporate into the atmosphere.

D.4.2 Volatile Organic Compounds (VOC) [326 IAC 8-3-5(a) and (b)]

- (a) Pursuant to 326 IAC 8-3-5(a) (Cold Cleaner Degreaser Operation and Control), the owner or operator of a cold cleaner degreaser facility construction of which commenced after July 1, 1990 shall ensure that the following control equipment requirements are met:
  - (1) Equip the degreaser with a cover. The cover must be designed so that it can be easily operated with one (1) hand if:
    - (A) The solvent volatility is greater than two (2) kiloPascals (fifteen (15) millimeters of mercury or three-tenths (0.3) pounds per square inch) measured at thirty-eight degrees Celsius (38EC) (one hundred degrees Fahrenheit (100EF));
    - (B) The solvent is agitated; or
    - (C) The solvent is heated.
  - (2) Equip the degreaser with a facility for draining cleaned articles. If the solvent volatility is greater than four and three-tenths (4.3) kiloPascals (thirty-two (32) millimeters of mercury or six-tenths (0.6) pounds per square inch) measured at thirty-eight degrees Celsius (38EC) (one hundred degrees Fahrenheit (100EF)), then the drainage facility must be internal such that articles are enclosed under the cover while draining. The drainage facility may be external for applications where an internal type cannot fit into the cleaning system.
  - (3) Provide a permanent, conspicuous label which lists the operating requirements outlined in subsection (b).
  - (4) The solvent spray, if used, must be a solid, fluid stream and shall be applied at a pressure which does not cause excessive splashing.
  - (5) Equip the degreaser with one (1) of the following control devices if the solvent volatility is greater than four and three-tenths (4.3) kiloPascals (thirty-two (32) millimeters of mercury or six-tenths (0.6) pounds per square inch) measured at thirty-eight degrees Celsius (38EC) (one hundred degrees Fahrenheit (100EF)), or if the solvent is heated to a temperature greater than forty-eight and nine-tenths degrees Celsius (48.9EC) (one hundred twenty degrees Fahrenheit (120EF)):
    - (A) A freeboard that attains a freeboard ratio of seventy-five hundredths (0.75) or greater.
    - (B) A water cover when solvent used is insoluble in, and heavier than, water.
    - (C) Other systems of demonstrated equivalent control such as a refrigerated chiller or carbon adsorption. Such systems shall be submitted to the U.S. EPA as a SIP revision.
- (b) Pursuant to 326 IAC 8-3-5(b) (Cold Cleaner Degreaser Operation and Control), the owner or

operator of a cold cleaning facility construction of which commenced after July 1, 1990 shall ensure that the following operating requirements are met:

- (1) Close the cover whenever articles are not being handled in the degreaser.
- (2) Drain cleaned articles for at least fifteen (15) seconds or until dripping ceases.
- (3) Store waste solvent only in covered containers and prohibit the disposal or transfer of waste solvent in any manner in which greater than twenty percent (20%) of the waste solvent by weight could evaporate.

**D.4.3 Particulate Matter (PM) [326 IAC 6-1]**

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Pursuant to 326 IAC 6-1 (Nonattainment Area Limitations), the allowable PM emission rate from the trimming, grinding and machining operations shall not exceed a grain loading of 0.03 grains per dry standard cubic foot of exhaust air.



**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
OFFICE OF AIR QUALITY**

**PART 70 OPERATING PERMIT  
CERTIFICATION**

Source Name: Richmond Liner Foundry and Machining Plant, Perfect Circle Division, Dana Corporation  
Source Address: 2153 and 2175 Williamsburg Pike, Richmond, Indiana 47375  
Mailing Address: P.O. Box 1446, Richmond, Indiana 47375  
Part 70 Permit No.: T 177-6887-00004

**This certification shall be included when submitting monitoring, testing reports/results or other documents as required by this permit.**

Please check what document is being certified:

- 9 Annual Compliance Certification Letter
- 9 Test Result (specify) \_\_\_\_\_
- 9 Report (specify) \_\_\_\_\_
- 9 Notification (specify) \_\_\_\_\_
- 9 Other (specify) \_\_\_\_\_

I certify that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.

Signature:

Printed Name:

Title/Position:

Phone:

Date:

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
OFFICE OF AIR QUALITY  
COMPLIANCE DATA SECTION**

**PART 70 OPERATING PERMIT  
QUARTERLY DEVIATION and COMPLIANCE MONITORING REPORT**

Source Name: Richmond Liner Foundry and Machining Plant, Perfect Circle Division, Dana Corporation  
Source Address: 2153 and 2175 Williamsburg Pike, Richmond, Indiana 47375  
Mailing Address: P.O. Box 1446, Richmond, Indiana 47375  
Part 70 Permit No.: T 177-6887-00004

Months: \_\_\_\_\_ to \_\_\_\_\_ Year: \_\_\_\_\_

Page 1 of 2

This report shall be submitted quarterly based on a calendar year. Any deviation from the requirements, the date(s) of each deviation, the probable cause of the deviation, and the response steps taken must be reported. Deviations that are required to be reported by an applicable requirement shall be reported according to the schedule stated in the applicable requirement and do not need to be included in this report. Additional pages may be attached if necessary. If no deviations occurred, please specify in the box marked "No deviations occurred this reporting period".

9 NO DEVIATIONS OCCURRED THIS REPORTING PERIOD.

9 THE FOLLOWING DEVIATIONS OCCURRED THIS REPORTING PERIOD

**Permit Requirement** specify permit condition #

**Date of Deviation:**

**Duration of Deviation:**

**Number of Deviations:**

**Probable Cause of Deviation:**

**Response Steps Taken:**

**Permit Requirement** specify permit condition #

**Date of Deviation:**

**Duration of Deviation:**

**Number of Deviations:**

**Probable Cause of Deviation:**

**Response Steps Taken:**

<b>Permit Requirement</b> specify permit condition #	
<b>Date of Deviation:</b>	<b>Duration of Deviation:</b>
<b>Number of Deviations:</b>	
<b>Probable Cause of Deviation:</b>	
<b>Response Steps Taken:</b>	
<b>Permit Requirement</b> specify permit condition #	
<b>Date of Deviation:</b>	<b>Duration of Deviation:</b>
<b>Number of Deviations:</b>	
<b>Probable Cause of Deviation:</b>	
<b>Response Steps Taken:</b>	
<b>Permit Requirement</b> specify permit condition #	
<b>Date of Deviation:</b>	<b>Duration of Deviation:</b>
<b>Number of Deviations:</b>	
<b>Probable Cause of Deviation:</b>	
<b>Response Steps Taken:</b>	

9 No deviation occurred in this month.

9 Deviation/s occurred in this month.

Deviation has been reported on: \_\_\_\_\_

Submitted by: \_\_\_\_\_

Title/Position: \_\_\_\_\_

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

Phone: \_\_\_\_\_

Attach a signed certification to complete this report.

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
OFFICE OF AIR QUALITY  
COMPLIANCE BRANCH  
100 North Senate Avenue  
P.O. Box 6015  
Indianapolis, Indiana 46206-6015  
Phone: 317-233-5674  
Fax: 317-233-5967**

**PART 70 OPERATING PERMIT  
EMERGENCY OCCURRENCE REPORT**

Source Name: Richmond Liner Foundry and Machining Plant, Perfect Circle Division, Dana Corporation  
Source Address: 2153 and 2175 Williamsburg Pike, Richmond, Indiana 47375  
Mailing Address: P.O. Box 1446, Richmond, Indiana 47375  
Part 70 Permit No.: T 177-6887-00004

**This form consists of 2 pages**

**Page 1 of 2**

- 9** This is an emergency as defined in 326 IAC 2-7-1(12)
- C** The Permittee must notify the Office of Air Quality (OAQ), within four **(4)** business hours (1-800-451-6027 or 317-233-5674, ask for Compliance Section); and
  - C** The Permittee must submit notice in writing or by facsimile within two **(2)** days (Facsimile Number: 317-233-5967), and follow the other requirements of 326 IAC 2-7-16.

If any of the following are not applicable, mark N/A

Facility/Equipment/Operation:

Control Equipment:

Permit Condition or Operation Limitation in Permit:

Description of the Emergency:

Describe the cause of the Emergency:

If any of the following are not applicable, mark N/A

Page 2 of 2

Date/Time Emergency started:
Date/Time Emergency was corrected:
Was the facility being properly operated at the time of the emergency?    Y    N Describe:
Type of Pollutants Emitted: TSP, PM-10, SO <sub>2</sub> , VOC, NO <sub>x</sub> , CO, Pb, other:
Estimated amount of pollutant(s) emitted during emergency:
Describe the steps taken to mitigate the problem:
Describe the corrective actions/response steps taken:
Describe the measures taken to minimize emissions:
If applicable, describe the reasons why continued operation of the facilities are necessary to prevent imminent injury to persons, severe damage to equipment, substantial loss of capital investment, or loss of product or raw materials of substantial economic value:

Form Completed by: \_\_\_\_\_

Title / Position: \_\_\_\_\_

Date: \_\_\_\_\_

Phone: \_\_\_\_\_

A certification is not required for this report.



**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
OFFICE OF AIR QUALITY  
COMPLIANCE DATA SECTION**

**Part 70 Quarterly Report**

Source Name: Richmond Liner Foundry and Machining Plant, Perfect Circle Division, Dana Corporation  
Source Address: 2153 and 2175 Williamsburg Pike, Richmond, Indiana 47375  
Mailing Address: P.O. Box 1446, Richmond, Indiana 47375  
Part 70 Permit No.: T 177-6887-00004  
Facility: Electric Induction Melting Furnace (Unit ID 021)  
Parameter: Metal Charged  
Limit: 31,392 tons of metal charged per twelve (12) consecutive month period, equivalent to PM<sub>10</sub> emissions of 13.5 tons per year.

YEAR: \_\_\_\_\_

Month	Metal Charged (tons)	Metal Charged (tons)	Metal Charged (tons)
	This Month	Previous 11 Months	12 Month Total

9 No deviation occurred in this month.

9 Deviation/s occurred in this month.

Deviation has been reported on: \_\_\_\_\_

Submitted by: \_\_\_\_\_

Title/Position: \_\_\_\_\_

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

Phone: \_\_\_\_\_



Attach a signed certification to complete this report.

## Indiana Department of Environmental Management Office of Air Quality

### Addendum to the Technical Support Document for a Part 70 Operating Permit

**Source Name:** Richmond Liner Foundry and Machining Plant,  
Perfect Circle Division, Dana Corporation  
**Source Location:** 2153 and 2175 Williamsburg Pike, Richmond, Indiana 47375  
**County:** Wayne  
**SIC Code:** 3321, 3398 and 3592  
**Operation Permit No.:** T 177-6887-00090  
**Permit Reviewer:** Mark L. Kramer

On December 17, 2001, the Office of Air Quality (OAQ) had a notice published in the Palladium Item, Richmond, Indiana, stating that Perfect Circle Division, Dana Corporation had applied for a Part 70 Operating Permit to operate an iron sleeve casting and machining source. The notice also stated that OAQ proposed to issue a Part 70 Operating Permit for this operation and provided information on how the public could review the proposed Part 70 Operating Permit and other documentation. Finally, the notice informed interested parties that there was a period of thirty (30) days to provide comments on whether or not this Part 70 Operating Permit should be issued as proposed.

On February 14, 2002, Mary Ann Saggese, Esq. of Plews Shadley Racher & Braun, attorneys for Cana Corporation, submitted comments on the proposed Part 70 Operating Permit. The comments are as follows: The permit language, if changed, has deleted language as ~~strikeouts~~ and new language **bolded**.

#### Comment 1:

##### Section A.1

Please replace Thomas Bryant with Tim Boncher. For a more descriptive general statement, the first sentence of Section A.1 should state, as follows:

The Permittee owns and operates a stationary *grey and ductile* iron sleeve casting and machining source...

#### Response 1:

Condition A.1 has been revised to update the responsible official and refine the description of the source as follows:

##### A.1 General Information [326 IAC 2-7-4(c)] [326 IAC 2-7-5(15)] [326 IAC 2-7-1(22)]

The Permittee owns and operates a stationary **grey and ductile** iron sleeve casting and machining source, consisting of two (2) plants designated as Plants 1 and 2.

**Responsible Official:** **Tim Boncher** ~~Thomas Bryant~~, or the person holding the title of Plant Manager or the Richmond Machine Plant Manager or the acting Richmond Machine Plant Manager

#### Comment 2:

##### Section A.3 (g) Facility Description (g), and part (g) on page 2 of the Technical Support Document

The Tundish ladles vent to the outdoors through both a connected vent stack (approximately 3,000

ACFM) designated as Stack 050a and through roof ventilation designated as Stack 050b (approximately 42,000 ACFM).

**Response 2:**

The Technical Support Document for this proposed Part 70 Operating Permit is not updated due to comments submitted during the Public Comment period. All changes and responses to comments are documented in this Addendum to the Technical Support Document for a Part 70 Operating Permit.

In Condition A.3(g) and Section D.3(g), the exhaust location for the tundish ladles has been revised as well as the capacity from 40 to 4 tons per hour (See Comment 15) as follows:

A.3 Emission Units and Pollution Control Equipment Summary [326 IAC 2-7-4(c)(3)]  
[326 IAC 2-7-5(15)]

---

This stationary source consists of the following emission units and pollution control devices:

- (g) One (1) tundish ladle for Group 3 spinner machines and two (2) back-up tundish ladles for magnesium inoculation, known as Unit ID 050, exhausted through **vent Stack 050a and through roof ventilation Stack 050b**, installed in 1960, capacity: 40 tons of iron treated per hour.

SECTION D.3 FACILITY OPERATION CONDITIONS

Facility Description [326 IAC 2-7-5(15)]

- (g) One (1) tundish ladle for Group 3 spinner machines and two (2) back-up tundish ladles for magnesium inoculation, known as Unit ID 050, exhausted through **vent Stack 050a and through roof ventilation Stack 050b**, installed in 1960, capacity: 40 tons of iron treated per hour.

**Comment 3:**

Section A.3 (j) and D.3(j)

The direct fired scrap charge pre-heater is exhausted through only Stack 013 and not Stack 080. Please revise this section to delete the words "or Stack 080". (Stack 080 was removed.)

**Response 3:**

Condition A.3(j) and Section D.3(j) have been revised to delete Stack 080 as follows:

A.3 Emission Units and Pollution Control Equipment Summary [326 IAC 2-7-4(c)(3)]  
[326 IAC 2-7-5(15)]

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This stationary source consists of the following emission units and pollution control devices:

- (j) One (1) direct-fired scrap charge pre-heater, known as Unit ID 080, equipped with a baghouse, known as Unit ID DC#13, exhausted through Stack 013 ~~or Stack 080~~, installed in 1972, capacity: 10 tons of metal per hour (baghouse does not have to be operated at all times).

SECTION D.3 FACILITY OPERATION CONDITIONS

Facility Description [326 IAC 2-7-5(15)]

- (j) One (1) direct-fired scrap charge pre-heater, known as Unit ID 080, equipped with a baghouse, known as Unit ID DC#13, exhausted through Stack 013 ~~or Stack 080~~, installed in 1972, capacity: 10 tons of metal per hour (baghouse does not have to be operated at all times).

**Comment 4:**

Section A.3 (o)

This section needs to be corrected to include Stack 100c. Please insert the words *or 100c* in the third row following *Stack 100b*.

**Response 4:**

Condition A.3(o) and Section D.3(o) have had the option of exhausting through Stack 100c added as follows:

A.3 Emission Units and Pollution Control Equipment Summary [326 IAC 2-7-4(c)(3)]  
[326 IAC 2-7-5(15)]

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This stationary source consists of the following emission units and pollution control devices:

- (o) One (1) pangborn ES-2029-1\S000203 rotoblast cabinet (cleaning mill #7), known as Unit ID 100, equipped with an interchangeable baghouse, known as DC#10 or DC#9, each equipped with a bag leak detection system, exhausting through Stack 100b **or 100c**, installed in 2001, capacity: 13.0 tons of metal per hour, blast rate 80.75 tons of cast steel shot per hour.

SECTION D.3

FACILITY OPERATION CONDITIONS

Facility Description [326 IAC 2-7-5(15)]

- (o) One (1) pangborn ES-2029-1\S000203 rotoblast cabinet (cleaning mill #7), known as Unit ID 100, equipped with an interchangeable baghouse, known as DC#10 or DC#9, each equipped with a bag leak detection system, exhausting through Stack 100b **or 100c**, installed in 2001, capacity: 13.0 tons of metal per hour, blast rate 80.75 tons of cast steel shot per hour.

The added flexibility of exhausting the PM emission through stack 100c for cleaning mill#7 still complies with the allowable PM emission rate of 1.98 pounds per hour for Stack 100c. Note the actual emissions for any stack were proportioned by the flow rate for that stack. The table from the TSD has been updated to show that clean mill #7 can exhaust through Stack 100c as follows:

Operation	Allowable grain loading (grains/dscf)	Allowable PM Emission Rate (pounds per hour)		Potential PM Emission Rate After Controls (pounds per hour)
Four (4) shot blasters (Unit ID 100)	0.03			
Mill #1		100a	3.96	3.70
Mill #7 (DC#9 or DC#10)		100b	3.96	3.83
or				
Mill #7 (DC#9 or DC#10)		100c	1.98	1.85
Mills #3 & #5 (DC#9 or DC#10)		100c	1.98	1.85
or				
Mills #3 and #7 (DC#9 or DC#10)		100b	3.96	3.70
Mills #5 and #7 (DC#9 or DC#10)		100b	3.96	3.70

**Comment 5:**

Sections B.15, D.1.7(h), D.3.6(e), D.3.9, D.3.11, D.1.13, and B.11(b)

The previous draft permit contained Conditions (b)(1) and (b)(2) which expressly excepted certain events from being considered a deviation. Dana believes that the express deviation exceptions are both reasonable and appropriate and should be retained in the final Title V permit. IDEM has no legal basis for now denying these deviation exclusions which are included in all prior issued permits. There are no rule changes which would authorize these deletions of previously granted exclusions. Permit applicants have a right to have their applications considered in accordance with the laws in effect when the application is made, not as IDEM sees fit to make changes over the five (5) year period since the application was submitted. It is our understanding that IDEM intended in the redraft of this permit to simply relocate the deviation exceptions to their specific conditions, but several events were not provided.

Under former Condition B.15(b)(1), an excursion from compliance monitoring parameters as identified in Section D of the permit is not a deviation unless the parameter (s) are tied to a limit or rule. This is reasonable and appropriate because if no limit or rule is violated then an excursion that might result from monitoring parameters should not in itself be considered a deviation. In the revised provisions, IDEM has now provided in this proposed Part 70 Permit the necessary statement excluding excursions from compliance monitoring parameters for most of the parameters directly in the Section D requirements. If the generalized Section B.15 deviation exceptions are to remain deleted, IDEM must expressly state within all of the compliance monitoring parameters that an excursion would not be considered a deviation. Specifically, Section D.1.7 Visible Emission and Turbidity Notations should state in paragraph (h) that "an abnormal VE or turbidity observation/ notation is not a deviation from this permit." Section D.3.6(e) should state that "an abnormal VE observation/notation is not a deviation from this permit." Dana also believes that the Section D.3.9 Broken or Failed Bag Detection, Section D.3.11 Activated Bag Leak Detection System Signal and Section D.1.13 Failure Detection conditions should contain an express statement that failure of a baghouse (single or multi-compartment units) or failure of a scrubber and/or demister "is not a deviation from this permit provided the Permittee takes reasonable response steps."

Under former Condition B.15(b)(2), a failure to implement element(s) of the Preventive Maintenance Plan (PMP) would not be considered a deviation unless the failure caused or contributed to a deviation. Dana believes it is reasonable and appropriate that if a failure to implement the PMP does not cause a deviation from a permit condition then the failure should not in itself be considered a deviation. If the B.15(b)(2) deviation exception is to remain deleted, IDEM must expressly state within the PMP Section B.11(b) the deviation exception which IDEM has stated it did not intend to deny Dana. The current Condition B.11(B) elevates failure to implement the PMPs to a deviation and violation status regardless of whether a violation of any limitation on emissions or potential to emit even occurred. The current language is problematic, inappropriate and not consistent with IDEM's stated intentions. Dana requests that Condition B.11(b) be replaced with the following:

"Failure to implement elements of the PMP is not a deviation from this permit unless such failure has caused or contributed to a violation of any limitation on emissions or potential to emit."

Dana respectfully notes that IDEM's latest changes to this Part 70 Permit would result in equating the Quarterly Deviation Report to effectively a Quarterly Annual Compliance Certification. This is over burdensome and not founded on any legal requirement. We request that the above requested deviation exceptions be included in this permit to correct this result.

One final correction is necessary with the title of the required report for Condition B.15(a). The title in two locations requires the deletion of the words "and Compliance Monitoring" consistent with the changes previously made.

**Response 5:**

In Condition B.15(a), the reference to the title of the report form has not been changed in (a), but the wording "and Compliance Monitoring" has been added to (c) as follows: The title of the Quarterly Deviation and Compliance Monitoring Report can not be changed to Quarterly Deviation Report because 326 IAC 2-7-5(3)(C) requires any compliance monitoring to be reported at least every six (6) months. Therefore, the title of the quarterly report form has been changed to Quarterly Deviation and Compliance Monitoring Report and in Condition C.20(a) as follows:

**B.15 Deviations from Permit Requirements and Conditions [326 IAC 2-7-5(3)(C)(ii)]**

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- (c) Emergencies shall be included in the Quarterly Deviation **and Compliance Monitoring** Report.

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
OFFICE OF AIR QUALITY  
COMPLIANCE DATA SECTION

PART 70 OPERATING PERMIT  
QUARTERLY DEVIATION **AND COMPLIANCE MONITORING** REPORT

**C.20 General Reporting Requirements [326 IAC 2-7-5(3)(C)] [326 IAC 2-1.1-11]**

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- (a) The source shall submit the attached Quarterly Deviation **and Compliance Monitoring Report** or its equivalent. Any deviation from permit requirements, the date(s) of each deviation, the cause of the deviation, and the response steps taken must be reported. This report shall be submitted within thirty (30) days of the end of the reporting period. The Quarterly Deviation **and Compliance Monitoring Report** shall include the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

Condition B.11(b) clearly states that the Permittee must implement the PMP as necessary such that failure to implement the PMP does not cause or contribute to a violation.

Conditions D.1.7(h) and D.3.6(e) have been revised since the mere observation of a visible emission notation or turbidity that is abnormal is not a violation of the proposed permit as follows:

**D.1.7 Visible Emissions and Turbidity Notations**

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- (h) The Compliance Response Plan for this unit shall contain troubleshooting contingency and response steps for when an abnormal emission is observed. **An observation of an abnormal visible emission notation or turbidity observation is not a deviation from this permit.** Failure to take response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports, shall be considered a ~~violation~~ **deviation** of this permit.

**D.3.6 Visible Emissions Notations**

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- (e) The Compliance Response Plan for this unit shall contain troubleshooting contingency and

response steps for when an abnormal emission is observed. **An observation of an abnormal visible emission notation is not a deviation from this permit.** Failure to take response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports, shall be considered a ~~violation~~ **deviation** of this permit.

In Conditions D.3.9(a) and D.3.11(b)(1), a baghouse failure will still be considered a deviation from the permit because such failure would likely indicate that emissions exceeded allowable emission rates. However in Conditions D.3.9(b) and D.3.11(b)(2), a single compartment baghouse must be shutdown and therefore the suggested wording does not apply.

Likewise in Condition D.1.13 in the event that a scrubber and/or demister failure has been observed failed units and the associated process will be shut down immediately until the failed units have been repaired or replaced and suggested wording does not apply. Therefore, the suggested wording has not been incorporated into Conditions D.3.9(a)(b), D.3.11 and D.1.13.

In Conditions D.3.9(b) and D.3.11(b)(2), the definition of bag failure for a single compartment baghouse has been clarified for single compartment baghouses to state that if a failure is indicated by a significant drop in the baghouse's pressure readings with abnormal visible emissions or the failure is indicated by an opacity violation, or if bag failure is determined by other means, such as gas temperatures, flow rates, air infiltration, leaks, dust traces or triboflows, failed units and the associated process will be shut down immediately until the failed units have been repaired or replaced. The last sentence has been deleted due to its redundancy with the Emergency Provision condition in Section B.

In addition, Conditions D.3.9(a) and D.3.11(b)(1) have been revised to indicated that failure to take response steps shall be considered a deviation of the permit rather than a violation as follows:

#### **D.3.9 Broken or Failed Bag Detection for Baghouses Without Bag Leak Detection Systems**

In the event that bag failure has been observed for the centrifugal casting operations (Unit ID 090):

- (a) For multi-compartment units, the affected compartments will be shut down immediately until the failed units have been repaired or replaced. Operations may continue only if there are no visible emissions or if the event qualifies as an emergency and the Permittee satisfies the emergency provisions of this permit (Section B- Emergency Provisions). Within eight (8) business hours of the determination of failure, response steps according to the timetable described in the Compliance Response Plan shall be initiated. For any failure with corresponding response steps and timetable not described in the Compliance Response Plan, response steps shall be devised within eight (8) business hours of discovery of the failure and shall include a timetable for completion. Failure to take response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports, shall be considered a ~~violation~~ **deviation** of this permit.
- (b) For single compartment baghouses, **if failure is indicated by a significant drop in the baghouse's pressure readings with abnormal visible emissions or the failure is indicated by an opacity violation, or if bag failure is determined by other means, such as gas temperatures, flow rates, air infiltration, leaks, dust traces or triboflows,** failed units and the associated process will be shut down immediately until the failed units have been repaired or replaced. ~~Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section C - Emergency Provisions).~~



#### D.3.11 Activated Bag Leak Detection System Signal

In the event that the bag leak detection system signal is activated, the Permittee shall immediately confirm whether or not the signal has been activated by a leak as follows:

- (a) The Permittee shall remove and examine the probe and then re-insert it. If the signal is erroneous, the bag leak detection system shall be reset.
- (b) If the signal is confirmed, the Permittee shall proceed as indicated in Condition D.3.9(a) for multi-compartment units or Condition D.3.9(b) for single compartment baghouses.
  - (1) For multi-compartment units, the affected compartments will be shut down immediately until the failed units have been repaired or replaced. Operations may continue only if there are no visible emissions or if the event qualifies as an emergency and the Permittee satisfies the emergency provisions of this permit (Section B- Emergency Provisions). Within eight (8) business hours of the determination of failure, response steps according to the timetable described in the Compliance Response Plan shall be initiated. For any failure with corresponding response steps and timetable not described in the Compliance Response Plan, response steps shall be devised within eight (8) business hours of discovery of the failure and shall include a timetable for completion. Failure to take response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports, shall be considered a ~~violation~~ **deviation** of this permit.
  - (2) For single compartment baghouses, **if failure is indicated by a significant drop in the baghouse's pressure readings with abnormal visible emissions or the failure is indicated by an opacity violation, or if bag failure is determined by other means, such as gas temperatures, flow rates, air infiltration, leaks, dust traces or triboflows**, failed units and the associated process will be shut down immediately until the failed units have been repaired or replaced. ~~Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section C - Emergency Provisions).~~

#### **Comment 6:**

##### Quarterly Deviation Report, Page 44

The first sentence within the Quarterly Deviation Report requires that the source certify that "This report is an affirmation that the source has met all the requirements stated in this permit." This sentence must be deleted because it is not consistent with the reporting of solely deviations. The permit contains several requirements which, if exceeded, are expressly stated to not be considered a deviation (i.e., D.1.8(a) Temperature Requirement.) If an excursion from a permit requirement has occurred and it is expressly not a deviation, it could be argued that the source cannot "affirm that the source has met all the requirements." Such an affirmation would be consistent with the Annual Compliance Certification but not a report of solely deviations.

#### **Response 6:**

The first sentence of the Quarterly Deviation and Compliance Monitoring Report form has been deleted since this form is requesting the documentation of all deviations and not whether or not the source has complied with all requirements of the proposed permit. The title of the form has changed as indicated

in Response 5. The change is as follows:

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
OFFICE OF AIR QUALITY  
COMPLIANCE DATA SECTION

PART 70 OPERATING PERMIT  
QUARTERLY DEVIATION **AND COMPLIANCE MONITORING** REPORT

Source Name: Richmond Liner Foundry and Machining Plant, Perfect Circle Division, Dana Corporation  
Source Address: 2153 and 2175 Williamsburg Pike, Richmond, Indiana 47375  
Mailing Address: P.O. Box 1446, Richmond, Indiana 47375  
Part 70 Permit No.: T 177-6887-00004

Months: \_\_\_\_\_ to \_\_\_\_\_ Year: \_\_\_\_\_

Page 1 of 2

~~This report is an affirmation that the source has met all the requirements stated in this permit.~~ This report shall be submitted quarterly based on a calendar year. Any deviation from the requirements, the date(s) of each deviation, the probable cause of the deviation, and the response steps taken must be reported. Deviations that are required to be reported by an applicable requirement shall be reported according to the schedule stated in the applicable requirement and do not need to be included in this report. Additional pages may be attached if necessary. If no deviations occurred, please specify in the box marked "No deviations occurred this reporting period".

**Comment 7:**

Sections C.16(b)(4), B.15, D.1.7(h), D.1.8(a) and (b), D.1.9, D.1.10, D.1.11, D.3.6(e), D.3.7(a) and (b), D.3.9, D.3.11(b)

Prior to this public noticed version of the Part 70 Permit, all previously issued Part 70 Permits (and Dana's April 2001 draft permit) included the following statements:

C.17(b): "Failure to take reasonable response steps may constitute a violation of the permit."

B.15(b): "A permittee's failure to take the appropriate response step when an excursion of a compliance monitoring parameter has occurred is a deviation."

Our interpretation of these permit statements is that a deviation is not necessarily a violation. In the current public noticed version of the Part 70 Permit, the Condition B.15(b) statement was deleted and the Condition C.17(b) statement was altered to mandate that:

"Failure to take reasonable response steps shall constitute a violation of the permit."  
(Emphasis added)

Assessing these statements together with the Comment 5, pertaining to condition B.15 above, Dana respectfully seeks IDEM to clarify whether there is any distinction between a "deviation" and a "violation" or are they one in the same? Dana firmly believes that a deviation should not equate to a violation. The two words are remarkably unique and different. A "deviation" does not suggest that an enforcement might ensue, whereas a "violation" does infer that an enforcement action might be considered. These separate levels of variation from the permit requirements should be maintained to ensure that the Title V and Indiana Administrative Code requirements are implemented appropriately. The rules and regulations allow for only "reasonable" monitoring, recordkeeping, and response steps.

IDEM's apparent equation of all deviations to the level of a violation is not reasonable. Dana requests that IDEM replace the word "shall" with the word "may" in C.16(b)(4). Similarly, to maintain the necessary distinction between a deviation and a violation, each statement within each compliance monitoring requirement must be revised, as follows:

"Failure to take response steps in accordance with Section C -- Compliance Response Plan -- Failure to Take Response Steps, shall be considered a *deviation* ~~violation~~ of this permit."

The above revision should occur within Conditions D.1.7(h), D.1.8(a) and (b), D.1.9, D.1.10, D.1.11, D.3.6(e), D.3.7(a) and (b), D.3.9, D.3.11(b).

#### Response 7:

Failure to take response steps will be considered a deviation rather than a violation of the permit in Conditions D.1.7(h), D.1.8(a) and (b), D.1.9, D.1.10, D.1.11, D.3.6(e), D.3.7(a) and (b), D.3.9 and D.3.11(b). Conditions D.1.7(h), D.3.6(e), D.3.9 and D.3.11(b) have been changed in Response 5 above and D.1.11 has been changed in Response 13 and are not repeated here. Conditions D.1.8(a) and (b) (now D.1.9(b), D.1.9, D.1.10 as well as D.3.7(a) and (b) are changed as follows:

In addition, Condition D.1.8(b) has been moved to Condition D.1.9(b) in the proposed permit as shown.

Note that a deviation is not a violation unless IDEM uses its discretion to take enforcement action. Then, the deviation becomes a violation.

#### D.1.8 Afterburners Parametric Monitoring

- 
- (a) A continuous monitoring system shall be calibrated, maintained, and operated on the two (2) afterburners for measuring operating temperature. The output of this system shall be recorded, and that temperature shall be greater than or equal to the normal temperature used to demonstrate compliance during the most recent compliance stack test, or the Permittee shall take reasonable response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports. A temperature reading that is outside the normal range is not a deviation from this permit. Failure to take response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports, shall be considered a ~~violation~~ **deviation** of this permit.
- ~~(b) The fan speed and/or motor amperage shall be observed at least once per work day when the two (2) afterburners are in operation. When for any one (1) reading, the fan speed and/or motor amperage are outside the normal range or the range of fan speeds and/or motor amperages established during the latest stack test, the Permittee shall take reasonable response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports. A fan speed and/or motor amperage reading that is outside the normal range is not a deviation from this permit. Failure to take response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports, shall be considered a violation of this permit.~~
- (be) The instruments used for determining the temperature, ~~fan speed and motor amperage~~ shall comply with Section C - Pressure Gauge Specifications and Other Instruments, of this permit, shall be subject to approval by IDEM, OAQ, and shall be calibrated at least once every ~~six (6)~~ **twelve (12)** months.

#### D.1.9 Scrubber Parametric Monitoring

- 
- (a) The Permittee shall record the total static pressure drop across the venturi scrubber used in conjunction with the two (2) alternating cupolas, known as Unit ID 010, (only one (1) operates at a time) at least once per shift when either of the cupolas is in operation when venting to the atmosphere. When for any one (1) reading, the pressure drop across the scrubber is below a minimum of 20.0 inches of water or a minimum established during the latest stack test, the Permittee shall take reasonable response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports. A pressure reading that is less than the above mentioned minimum is not a deviation from this permit. Failure to take response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports, shall be considered a ~~violation~~ **deviation** of this permit.
- (b) **The fan speed and/or motor amperage shall be observed at least once per work day when the scrubbers are in operation. When for any one (1) reading, the fan speed and/or motor amperage are outside the normal range or the range of fan speeds and/or motor amperages established during the latest stack test, the Permittee shall take reasonable response steps in accordance with Section C- Compliance Response Plan- Preparation, Implementation, Records, and Reports. A fan speed and/or motor amperage reading that is outside the normal range is not a deviation from this permit. Failure to take response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports, shall be considered a deviation of this permit.**
- (c) The instrument used for determining the pressure, **fan speed and motor amperage** shall comply with Section C - Pressure Gauge Specifications and Other Instruments, of this permit, shall be subject to approval by IDEM, OAQ, and shall be calibrated at least once every ~~six (6)~~ **twelve (12)** months.

#### D.1.10 pH of the Scrubbing Liquor

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The Permittee shall record the pH of the scrubbing liquor used in conjunction with the two (2) alternating cupolas, known as Unit ID 010, (only one (1) operates at a time) at least once per shift when the cupola is in operation when venting to the atmosphere. When for any one (1) reading, the pH is outside the normal range of 6.5 and 9.0 or the range of pH established during the latest stack test, the Permittee shall take reasonable response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports. A pH reading that is outside the above mentioned range is not a deviation from this permit. Failure to take response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports, shall be considered a ~~violation~~ **deviation** of this permit.

The instrument used for determining the pH shall comply with Section C - Pressure Gauge Specifications and Other Instruments, of this permit, shall be subject to approval by IDEM, OAQ, and shall be calibrated at least once every ~~six (6)~~ **twelve (12)** months.

#### D.3.7 Parametric Monitoring

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- (a) The Permittee shall record the total static pressure drop across each of the eight (8) bag-houses, known as DC#1, DC#2A, DC#3, DC#4, DC#7 & DC#8, DC#5 and DC#6, controlling the centrifugal casting operations at least once per shift when casting is in operation. When for any one (1) reading, the pressure drop across each of the baghouses is outside the normal range of 2 to 8 inches of water or a range established during the latest stack test, the Permittee shall take reasonable response steps in accordance with Section C - Compliance

Response Plan - Preparation, Implementation, Records, and Reports. A pressure reading that is outside the above mentioned range is not a deviation from this permit. Failure to take response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports, shall be considered a ~~violation~~ **deviation** of this permit.

- (b) The Permittee shall record the total static pressure drop across each of the three (3) baghouses, known as DC#2, DC#10 and DC#9 controlling the cleaning operations at least once per shift when any shot blaster is in operation. When for any one (1) reading, the pressure drop across each of the baghouses is outside the normal range of 2 to 8 inches of water for DC#2, DC#10 and DC#9 or a range established during the latest stack test, the Permittee shall take reasonable response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports. A pressure reading that is outside the above mentioned range is not a deviation from this permit. Failure to take response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports, shall be considered a ~~violation~~ **deviation** of this permit.
- (c) The instrument used for determining the pressure shall comply with Section C - Pressure Gauge and Other Instrument Specifications, of this permit, shall be subject to approval by IDEM, OAQ, and shall be calibrated at least once every ~~six (6)~~ **twelve (12)** months.

**Comment 8:**

Section C.16(f)

The draft permit that IDEM released in April 2001 contained a Condition C.17(f) whereby, at IDEM's discretion, Dana would be excused from limited failure to perform the monitoring and record keeping when the equipment is operating as required in Section D, provided that Dana would provide adequate justification and documents that such failures do not exceed five percent of the operating time in any quarter. This condition has been replaced by an entirely new condition in C.16(f) in the latest draft permit that does not allow any failure to perform monitoring and record keeping except for time to perform quality assurance and maintenance activities.

These deletions are unrealistic, inflexible and unreasonable. For example, an employee who is scheduled to perform monitoring on any day may suddenly become seriously ill (kidney stones, heart attack, etc.) or otherwise must miss work due to a sudden at-home personal emergency (serious injury due to car accident, or child is shot at school, etc.). It is entirely conceivable that in the event of a sudden illness or personal emergency event that one or more required monitoring events may unintentionally be missed. For situations like these examples that may occur, Dana requests that the new condition C.16(f) be replaced with the condition C.17(f) that was in the April 2001 draft permit, as well as all prior issued permits, as follows:

At its discretion, IDEM may excuse the Permittee's failure to perform the monitoring and record keeping as required by Section D, if the Permittee provides adequate justification and documents that such failures do not exceed five percent (5%) of the operating time in any quarter. Temporary, unscheduled unavailability of qualified staff shall be considered a valid reason for failure to perform the monitoring or record keeping requirements in Section D.

It is also quite detrimental to Dana that all prior issued permits contained this type of express statement of IDEM's discretion with compliance issues, and IDEM would now seek to remove such statement from this permit. It could be interpreted by overzealous citizens pursuing a compliance action as though Dana should be given no discretion since all other sources have been expressly given

such a statement.

Notwithstanding the above request to reinstate the entire April 2001 draft C.17 (f), Dana requests that Condition C.16 (f) be revised as follows:

Except as otherwise provided by a rule or provided specifically in Section D, all monitoring as required in Section D shall be performed when the emission unit is operating, except for temporary, unscheduled unavailability of qualified staff to perform the monitoring or record keeping and except for time necessary to perform quality assurance and maintenance activities. (Note that the only additional language is as approved in the other source permits already issued.)

Dana's requests are reasonable, and it is unreasonable to deny Dana, who has been cooperating with IDEM on the drafting of this permit for over 5 years. Since IDEM has previously acknowledged through prior permits and to Dana orally, that this type of failure to monitor or record pursuant to Section D requirements would be excused in the field by the IDEM Inspector, there should be no reason for IDEM to refuse our very reasonable request.

**Response 8:**

Neither 40CFR Part 70 nor 326 IAC 2 provide exceptions to the requirement to perform periodic monitoring. Therefore, the language regarding the OAQ's discretion to excuse failure to perform monitoring under certain conditions has been deleted. The OAQ retains this discretion to excuse minor incidents of missing data; however, it is not necessary to state criteria regarding the exercise of that discretion in the permit.

**Comment 9:**

Section D.1.5

This condition would require Dana to test the cupolas every 2.5 years from the date of a valid initial compliance test demonstration. In each of the previous draft permits that the IDEM has issued to Dana over the past three years, the testing on the cupolas and other emission units where IDEM is requiring compliance testing has been specified to occur every 5 years from the date of a valid initial compliance test demonstration. Dana believes that the testing of the cupolas every 2.5 years is an especially onerous, unreasonable, and unnecessary requirement. The parametric monitoring required in the Amended Agreed Order (continuous monitoring of afterburner temperature and scrubber water flow every five minutes, daily scrubber pressure drops, etc.) combined with the required cupola venturi scrubber system preventive maintenance satisfactorily ensures compliance with all the cupola emission limits.

**Response 9:**

The IDEM, OAQ stack test guidance requires stack testing of cupolas every two and a half (2.5) years rather than every five (5) years due to the large potential to emit. Since the testing frequency is every 2.5 years, the next stack should be conducted either 180 days after permit issuance or 2.5 years after the last valid stack test, whichever date is later. Therefore, Condition D.1.5 is changed as follows:

**D.1.5 Testing Requirements [326 IAC 2-7-6(1),(6)] [326 IAC 2-1.1-11]**

Within **180 days** ~~36 months~~ after issuance of this permit **or within two and a half (2.5) years of the last valid stack test, whichever is later**, in order to demonstrate compliance with Condition D.1.1, the Permittee shall perform PM testing of the exhaust stack serving the two (2) cupolas (Stack 010)

utilizing methods as approved by the Commissioner. This test shall be repeated at least once every two and a half (2.5) years from the date of this valid compliance demonstration. Testing shall be conducted in accordance with Section C- Performance Testing.



**Comment 10:**

Section D.1.7(b)

This condition needs to be corrected because there are two overhead fans that vent the electric furnaces when baghouse Unit ID DC#13 is not running. These fans are known as Stack 070 and Stack 020. In the fourth row, please delete (*Stack 013*) and replace with (*Stack 070 and Stack 020, general exhausts*).

**Response 10:**

Condition A.3(b), Section D.3(b) and Condition D.1.7(b) have been revised to indicate that when the baghouse is not operating the emissions are exhausted through general ventilation Stacks 020 and 070 as follows:

A.3 Emission Units and Pollution Control Equipment Summary [326 IAC 2-7-4(c)(3)]  
[326 IAC 2-7-5(15)]

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This stationary source consists of the following emission units and pollution control devices:

- (b) Three (3) electric induction melting furnaces (#2, #3, and #4), known as Unit ID 020, equipped with a baghouse, known as Unit ID DC#13, exhausted through Stack 013 **or exhausted by overhead fans through Stacks 020 and 070, general exhausts**, installed in 1972, capacity: 3.5 tons of metal per hour, each (baghouse does not have to be operated at all times).

SECTION D.1 FACILITY OPERATION CONDITIONS

Facility Description [326 IAC 2-7-5(15)]

- (b) Three (3) electric induction melting furnaces (#2, #3, and #4), known as Unit ID 020, equipped with a baghouse, known as Unit ID DC#13, exhausted through Stack 013 **or exhausted by overhead fans through Stacks 020 and 070, general exhausts**, installed in 1972, capacity: 3.5 tons of metal per hour, each (baghouse does not have to be operated at all times).

D.1.7 Visible Emissions and Turbidity Notations

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- (b) In lieu of performing visible emissions notations of the four (4) electric induction furnaces exhaust, the Permittee may operate a baghouse to control emissions from the four (4) electric induction furnaces. Visible emission notations of the four (4) electric induction furnaces exhaust (**Stacks 020 and 070, general exhausts** ~~Stack 013~~) shall be performed once per shift during normal daylight operations when exhausting to the atmosphere if the baghouse, known as DC#13 is not operating. A trained employee shall record whether emissions are normal or abnormal.

**Comment 11:**

Section D.1.8(a), (b), and (c) and Section D.1.14 (f)

These sections would require Dana to continuously monitor and record the temperatures of the two afterburners. Monitoring and recording the temperatures on a continuous basis would be an additional requirement beyond the monitoring requirements that were specified in the cupola monitoring parameters as established in the Amended Agreed Order A-4238, dated December 30, 1999. The Amended Agreed Order requires Dana to continuously monitor the afterburners temperatures on a once every five (5) minutes basis. This five minute period allows for normal "blips" in the temperature

monitoring which are not reflective of the afterburners ability to operate at the required 1400 F minimum. Dana is required to record only those readings that may be outside of the range specified in the Amended Agreed Order. The device is also equipped with an alarm signal which activates if the reading is outside the required range. Corrective response action is required to deactivate the signal. It would be unreasonable and contradictory to the agreements and negotiations of the Amended Agreed Order to require Dana to now expend more funds to install a continuous recording device. There have been no compliance issues concerning the existing monitoring system since implementation of the Agreed Order and there is therefore no legal or rational basis for such an onerous and unnecessarily frequent monitoring and record keeping requirement. Corrective response action is required already under the current system and additional record keeping will not enhance or prove compliance to a greater degree. Furthermore, continuous recording in the form of a strip chart is not practical or sensible for a company which has been converting to a computerized format for its records. For the sake of finalizing this permit, Dana can agree to a requirement to record the afterburners temperature (even though it is not out of range), but Dana requests that the recording requirement be based on a fifteen (15) minutes average. In reviewing this more than sufficient recording frequency for a continuously monitored parameter, Dana points to the far more common practice in other states (e.g., Michigan and Ohio) to allow recording frequencies of foundry afterburner temperatures only once per hour. Please revise the language in the first sentence in Section D.1.8 (a) allowing Dana to monitor and record temperatures every 15 minutes as follows:

A continuous monitoring system shall be calibrated, maintained, and operated on the two (2) afterburners for measuring operating. The Permittee shall record the fifteen (15) minutes average from the output of this system shall be recorded, and that temperature shall be greater than or equal to the normal temperature used to demonstrate compliance during the most recent compliance stack test, or the Permittee shall take reasonable response steps ...

Condition D.1.8 (b) should not be incorporated in Condition D.1.8 but rather in Condition D.1.9 because fan speed and motor amperage are scrubber related (not afterburner related). Similarly, in Condition D.1.8 (c), fan speed and motor amperage should be deleted. Finally, the fan speed and motor amperage condition which requires recording once per work day within Condition D.1.14 (f) should be moved to a new provision under D.1.14.

Accordingly, please revise the language in Condition D.1.14 (f), as follows:

To document compliance with Condition D.1.8, the Permittee shall maintain records of the fifteen (15) minutes average temperature of the afterburners ~~continuously and the fan speed and/or motor amperage once per work day.~~

#### Response 11:

The Amended Agreed Order issued on December 30, 1999 was never meant to satisfy the Part 70 Operating Permit Requirement. This Agreed Order was the resolution of a Notice of Violation. The enforcement action is separate from the development of the Part 70 Operating Permit. Therefore, the compliance monitoring requirements in the Part 70 Operating Permit can be and often are different from those specified in an agreed order.

Richmond Liner Foundry stated that to comply with the Agreed Order a five minute period allowed for normal "blips" in the temperature monitoring which were not claimed to be reflective of the afterburners ability to operate at the required 1400 F minimum. The source was required to record only those readings that may be outside of the range specified in the Amended Agreed Order.

In order to show continuous compliance with the minimum temperature requirement in the proposed Part 70 Operating Permit, "blips" would not be a deviation from this proposed permit, but the failure to take response steps would be considered a deviation. Part 70 requires continuous compliance and therefore IDEM, OAQ rejects the proposal to monitor continuously, but only record fifteen (15) minute averages of the data. IDEM, OAQ requires a reading to be recorded at least once per minute. All readings need to be recorded, not just those which are out of range, less than 1,400 degrees Fahrenheit or less than the minimum temperature determined by a valid compliance stack test.

The requirement to record continuously is not onerous with today's computer technology and has been incorporated as a monitoring requirement in Part 70 Operating Permit when minimum temperatures must be maintained.

IDEM, OAQ concurs that the compliance monitoring requirements of fan speed and/or motor amperage apply to the scrubber for the cupola, rather than to the afterburners as shown in Response 7. Therefore Condition D.1.8(b) has been deleted and added as D.1.9(b) under Scrubber Parametric Monitoring as well as moving the reference to fan speed and motor amperage from Condition D.1.8(c) to Condition D.1.9(c) as shown in Response 7. Hence, the record keeping requirements specified in Condition D.1.14(f) and (g) have been revised as follows:

#### D.1.14 Record Keeping Requirements

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- (f) To document compliance with Condition D.1.8, the Permittee shall maintain records of temperature of the afterburners continuously ~~and the fan speed and/or motor amperage once per work day.~~
- (g) To document compliance with Condition D.1.9, the Permittee shall maintain records of pressure drop across the venturi scrubber once per shift **and the fan speed and/or motor amperage once per work day.**

#### Comment 12:

Section D.1.10 and Section D.1.14 (h)

These conditions as worded would require Dana to measure and record the scrubber water pH at least once per shift. This is more frequent and onerous than the at least once per day frequency that is in the previous draft permit and the Amended Agreed Order A-4238, dated December 30, 1999. The Amended Agreed Order states that Dana is to monitor the scrubber water pH once per day and record the measurements only if the pH is outside the limits established in the Amended Agreed Order (6.5 to 9.0). A once per day monitoring frequency is fully sufficient to monitor the scrubber's operation and compliance, and imposing more frequent monitoring is unnecessarily onerous and burdensome. Requiring such unreasonable frequencies and record keeping is not enhancing compliance, but rather only strapping Dana to applying more personnel to these operations and increasing the probability that someday, one person may eventually fail to record something. Please revise these conditions to reasonably reflect the relative importance of the scrubber pH when the pressure drop, continuous flow rate, and fan speed are already being monitored. Dana requests that these requirements be reinstated to monitor the pH once per day and record only those readings when the pH is outside the range of 6.5 to 9.0 or the range of pH established during the most recent stack test.

#### Response 12:

The frequency of the pH scrubber water has been retained at once per shift because the pH should be maintained within the stated range throughout each shift to certify that the emission units are in

continuous compliance; once per day is not adequate. IDEM, OAQ will still require that all pH readings be recorded, and not just those readings when the pH is outside the range of 6.5 to 9.0 or the range of pH established during the most recent stack test. Therefore as a result of these comments, Conditions D.1.10 and D.1.14(h) have not been revised.

**Comment 13:**

Section D.1.11 and Section D.1.14 (i)

These conditions as worded would require Dana to measure and record the venturi scrubber liquor (water) flow rate on a continuous basis. This is more frequent and onerous than the requirement just negotiated and agreed with the Amended Agreed Order A-4238, dated December 30, 1999. It states that Dana is to continuously monitor the venturi scrubber water flow rate every 5 minutes and record the measurements only if the flow rate is outside the limits established in the Amended Agreed Order. The device is also equipped with an alarm signal which activates if the reading is outside the required range. Corrective response action is required to deactivate the signal. It would be unreasonable and contradictory to the agreements and negotiations of the Amended Agreed Order to require Dana to now expend more funds to install either a different monitor or a continuous recording device. There have been no compliance issues concerning the existing monitoring system since implementation of the Agreed Order and there is therefore no legal or rational basis for such an onerous and unnecessarily frequent monitoring and record keeping requirement. Monitoring on a continuous basis of every five (5) minutes, responding to an activated alarm signal, and recording only if out of range is fully sufficient to monitor the scrubber's operation and compliance and imposing more frequent monitoring is unnecessarily onerous and burdensome. Requiring such unreasonable frequencies is not enhancing compliance, but rather only strapping Dana to applying more personnel to these operations and increasing the probability that someday, one person may eventually fail to record something. Additional monitoring and record keeping of the flow rate will not enhance or prove compliance to a greater degree for the scrubber when the pressure drop, pH, and fan speed are already being monitored. Furthermore, continuous recording in the form of a strip chart is not practical or sensible for a company which has been converting to a computerized format for its records. For the sake of finalizing this permit, Dana can agree to a requirement to record the scrubber flow rate (even though it is not out of range), but Dana requests that the recording requirement be based on a fifteen (15) minutes average. In reviewing this more than sufficient recording frequency for a continuously monitored parameter, Dana points to the far more common practice in other states (e.g., Michigan and Ohio) to allow recording frequencies of foundry scrubber water flow rates only once per hour.

In addition, the maximum 200 gallons per hour limit on flow rate should be deleted since the greater the flow rate the better the scrubber's ability to control emissions.

Accordingly, please revise Condition D.1.11 and D.1.14(i) allowing Dana to monitor and record the flow rate every 15 minutes, as follows:

D.1.11: The Permittee shall monitor and record the fifteen (15) minutes average ~~continuously record the~~ scrubbing liquor (water) flow rate across the venturi scrubber controlling the cupola when the cupola is in operation. When for any ~~fifteen (15) minutes average one (1)~~ reading, the flow rate for the scrubbing liquor is ~~below outside the normal range of 75.0 to 200.0~~ gallons of water per minute or a ~~range and a~~ flow rate established during the latest stack test, the permittee shall take reasonable response steps in accordance with Section C ...

D.1.14 (i): To document compliance with Condition D.1.11, the Permittee shall maintain records of scrubber water flow rate ~~taken on a fifteen (15) minutes average continuously~~.

**Response 13:**

Part 70 requires continuous compliance and therefore IDEM, OAQ rejects the proposal to monitor continuously and only record fifteen (15) minute averages of data. IDEM, OAQ requires a reading to be recorded at least once per minute. All readings need to be recorded, not just those which are above the minimum flow rate. The requirement to continuously record the flow rate has been retained in Condition D.1.11 because Part 70 requires certification of continuous compliance and the potential to emit is directly related to the control efficiency of the scrubber which is determined by the pH of the scrubber liquor. The criteria has been changed to maintain a minimum flow rate rather than a range of flow rates as follows:

**D.1.11 Venturi Scrubber Flow Rate**

The Permittee shall continuously record the scrubbing liquor (water) flow rate across the venturi scrubber controlling the cupola when the cupola is in operation. When for any one (1) reading, the flow rate for the scrubbing liquor ~~is outside the normal range~~ **shall be no less than a minimum** of 75.0 ~~to 200.0~~ gallons of water per minute or ~~a range and a minimum~~ flow rate established during the latest stack test, the Permittee shall take reasonable response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports. A flow rate reading that is **less than the minimum** ~~outside the normal range~~ is not a deviation from this permit. Failure to take response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports, shall be considered a **deviation** ~~violation~~ of this permit.

The instrument used for determining the flow rate shall comply with Section C - Pressure Gauge Specifications and Other Instruments, of this permit, shall be subject to approval by IDEM, OAQ, and shall be calibrated at least once every ~~six (6)~~ **twelve (12)** months.

**Comment 14:**

Sections D.1.8, D.1.9, D.1.10, D.1.11, and D.3.7(b)

These sections would require Dana to calibrate the pressure gauge and other monitoring instruments at least once every six (6) months rather than every 12 months as the previous draft permit specifies. Dana has contacted the supplier of its monitoring instruments in regards to the manufacturer's recommended frequency of calibration. The manufacturer has provided Dana with a written letter that states that performing calibrations on a once-per-year basis is sufficient to ensure proper operation of the instruments. A copy of the letter was attached to these comments and the body of the letter from Koester Corporation dated February 4, 2002 has been abstracted as follows:

"As a result of our discussion, and Cupola scrubber maintenance history, we recommend the following:

1. An annual preventive maintenance procedure performed by Koester Corporation which includes:
  - a. The calibration of all pressure and flow instruments.
  - b. An inspection and check and cleaning of all process tubing and piping to instruments.
  - c. A visual and electrical calibration of all temperature probes.
  - d. An electrical check of all draft fan/motor vibration sensors.

- e. An electrical check of draft fan speed sensor.
- f. A detailed report which includes calibration data, inspection results and recommended device repair and/or replacement."

Accordingly, please revert to the language that was used for each of these sections in the previous draft permit that would require the calibration of pressure gauges and other instruments "at least once every 12 months."

**Response 14:**

The letter from Koester Corporation dated February 4, 2002 claims that an annual calibration is sufficient to assure that all instrumentation required by compliance monitoring conditions will remain within specifications one (1) year after the last calibration. Therefore, IDEM, OAQ has changed the calibration frequency from once in every six (6) months to once in every twelve (12) months in Conditions D.1.8 D.1.9, D.1.10, D.1.11, and D.3.7(b) as shown in Response 7 and 13.

**Comment 15:**

Sections D.3.1 (b), D.3.4(c), TSD, Page 13 (Table), Page 2 of the Appendix (Table), Technical Support Document, Page 6 , Enforcement Issues (a) and (b), and Page 14

Dana believes that the Tundish ladle and back-up ladles are in compliance with 326 IAC 6-1-2(a) and so it will not be necessary for Dana to submit a protocol to IDEM. Dana's Title V permit application inadvertently contained an historical (1996) error regarding the maximum hourly production capacity of the Tundish ladle and backup ladles. The maximum capacity was listed in the application as 40 tons metal per hour, whereas the correct capacity is only 4.0 tons per hour. If inoculation were attempted at any rate greater than 4 tons per hour, a violent formation of gas in the ladle, a decidedly unsafe condition would result. Unsafe foundry and process operating conditions are contrary to Dana's high safety and operating standards and are not tolerated by Dana in any way. Historical records submitted to IDEM in 1998 and 1997 verify this fact in that the company inoculated only 960 ton in 1998 and 50 tons in 1997. (The ladles have not been operated in recent years so no further data is available.)

RMT has prepared a revised compliance demonstration for the Tundish ladles based on Dana's maximum Tundish ladles inoculation capacity of 4 tons iron per hour. The compliance demonstration shows that Dana is in compliance with 326 IAC 6-1-2(a) at the maximum inoculation capacity of the Tundish ladles. (See attached spreadsheet.)

Because the revised compliance demonstration for the Tundish ladles shows compliance with 326 IAC 6-1-2(a), the submittal of a protocol, the entire Condition D.3.1(b), and Condition D.3.4(c) testing requirement should be deleted.

In the table on page 13 of the TSD, the potential emission rate for the Tundish ladles (unit ID 050) will need to be revised based on the rates in the revised Tundish ladles compliance demonstration. The correct potential PM emission rate is 1.75 pounds per hour. The uncontrolled and controlled emission rates in the table for Tundish ladles at the bottom of Page 2 of the Appendix A will need to be revised to include these rates.

Because the revised Tundish ladle compliance demonstration shows compliance with 326 IAC 6-1-2(a), and the Tundish ladles have not even been operational, there is no cause nor evidentiary support for IDEM to take enforcement action on the Tundish ladles. Paragraphs (a) and (b) under the TSD

Enforcement Section on Page 6 and the reference on Page 14 must be fully extracted from the TSD.

**Response 15:**

The historical error in the capacity of the tundish ladles has been corrected in the equipment list in the response to Comment 2 above. As a result of the change in capacity of the tundish ladles, the emissions are calculated to be in compliance with 326 IAC 6-1 whenever they operate. Therefore, all references to enforcement action because of this error are without basis and a letter revoking the referral to enforcement has been sent to the source.

The potential to emit emission calculations have been revised and are attached as Appendix B to this document. As shown in Appendix B, the potential to emit PM and also PM<sub>10</sub> is 1.75 pounds per hour, equivalent 7.66 tons per year. Compliance with the 0.03 grains per dry standard cubic foot of outlet air is shown on page 9 of 9 of Appendix B for Stack 050, Stack 050a and Stack 050b. Stack 050a represents seven percent (7%) of the flow and to Stack 050b represents ninety-three percent (93%) of total flow rate of the combined stacks.

Thus Condition D.3.1(b) has been deleted and the allowable PM emission rates for Stacks 050a and 050b have been substituted for Stack 050 as follows:

**D.3.1 Particulate Matter (PM) [326 IAC 6-1]**

(a) Pursuant to 326 IAC 6-1-2(a), the particulate matter (PM) emissions from the one (1) tundish ladle for Group 3 spinner machines and two (2) back-up tundish ladles for magnesium inoculation (Unit ID 050) shall not exceed 0.03 grains per dry standard cubic foot equivalent to **0.742** ~~44.4~~ pounds per hour total at a flow rate of **2,886** ~~43,296~~ dry standard cubic feet per minute **for Stack 050a.**

(b) Pursuant to 326 IAC 6-1-2(a), the particulate matter (PM) emissions from the one (1) tundish ladle for Group 3 spinner machines and two (2) back-up tundish ladles for magnesium inoculation (Unit ID 050) shall not exceed 0.03 grains per dry standard cubic foot equivalent to **10.4** pounds per hour total at a flow rate of **40,410** dry standard cubic feet per minute **for Stack 050b.**

~~(b) Compliance Schedule~~

~~(1) Within thirty (30) days of permit issuance, the Permittee shall submit a protocol to IDEM, OAQ to bring the one (1) tundish ladle for Group 3 spinner machines and two (2) back-up tundish ladles for magnesium inoculation, known as Unit ID 050, into compliance with 326 IAC 6-1-2(a) by either proposing stack testing or installed add-on control equipment.~~

~~(2) Within thirty (30) days after the acceptance of the protocol by IDEM, OAQ, the Permittee shall commence the steps detailed in the protocol.~~

~~(3) Within 120 days after IDEM, OAQ acceptance of the protocol, the one (1) tundish ladle for Group 3 spinner machines and two (2) back-up tundish ladles for magnesium inoculation (Unit ID 050), shall be in compliance with 326 IAC 6-1-2(a).~~

Condition D.3.4(c) which requires testing of the tundish ladles has been retained since the calculations just show compliance based on the assumptions stated above. However, the requirement to retest the tundish ladles upon completion of a valid stack test has been deleted since there are no controls

associated with this emission unit. Therefore, Condition D.3.4(c) has been revised as follows:



**D.3.4 Testing Requirements [326 IAC 2-7-6(1),(6)] [326 IAC 2-1.1-11]**

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- (c) Within 180 days after issuance of this permit, in order to demonstrate compliance with Condition D.3.1(a), the Permittee shall perform PM testing of the exhaust stack 050 serving the one (1) tundish ladle for Group 3 spinner machines and two (2) back-up tundish ladles for magnesium inoculation, known as Unit ID 050, utilizing methods as approved by the Commissioner. ~~This test shall be repeated at least once every five (5) years from the date of this valid compliance demonstration.~~ Testing shall be conducted in accordance with Section C- Performance Testing.

**Comment 16:**

Section D.3.1(g)(1) and (2)

The stack numbers referenced in Section D.3.1 (g) (1) and (2) are still incorrect and need to be revised. As stated correctly in the Facility Description sections, Cleaning Mill # 1 exhausts to Stack 100a and Cleaning Mills 3, 5, and 7 exhaust to Stacks 100b and 100c. Accordingly, (g)(1) should be corrected to refer to Stacks 100b and 100c and (g)(2) should be corrected to refer to Stack 100 a.

**Response 16:**

The allowable PM emission rate pursuant to 326 IAC 6-1-2(a) is stated by Stack 100a, 100b and 100c, and is determined by the exit exhaust flow rate for that stack and not which of the cleaning mills happens to be connected to a particular stack at a given time. Thus, Condition D.3.1(g) which is abstracted as follows:

- (g) Pursuant to 326 IAC 6-1-2(a), the particulate matter (PM) emissions from the four (4) shot blasters [one (1) hanging conveyORIZED (cleaning mill #1) and three (3) rotoblaster (cleaning mills #3, #5 and #7)] (Unit ID 100) shall not exceed 0.03 grains per dry standard cubic foot, each, equivalent to:
- (1) 3.96 pounds per hour at a flow rate of 15,394 dry standard cubic feet per minute each for Stacks 100a and 100b, and
  - (2) 1.98 pounds per hour at a flow rate of 7,697 dry standard cubic feet per minute for Stack 100c.

clearly defines the allowable PM emission rate by stack. Therefore, no change is required for Conditions D.3.1(g)(1) and D.3.1(g)(2) of the proposed permit.

**Comment 17:**

Section D.3.2

It is inappropriate for this condition to impose PSD limits on Cleaning Mill 3 which was installed in 1968. Due to Dana's combined operation of the Cleaning Mills 3, 5, & 7 and the applicability of PSD limits to solely Cleaning Mills 5 & 7, Dana requests that an express statement be added to Condition D.3.2 to state that Cleaning Mill 3 is not subject to any PSD limits when operated without Cleaning Mill 5 or 7 since it was installed in 1968 prior to PSD applicability.

**Response 17:**

Cleaning Mill 3 which was installed prior to the applicability date of 326 IAC 2-2 of August 7, 1977 when

operating alone is not subject to PSD. Therefore, the wording has been incorporated into Condition D.3.2 to indicate that if cleaning mill #3 operates alone, there are no PSD emission rate limits applicable to cleaning mill #3 as follows:

**D.3.2 Prevention of Significant Deterioration (PSD) [326 IAC 2-2]**

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- (a) The PM emissions from any two (2) of the three (3) cleaning mills #3, #5 or #7 exhausted through Stack 100b shall not exceed 5.71 pounds of PM per hour.
- (b) The PM<sub>10</sub> emissions from any two (2) of the three (3) cleaning mills #3, #5 or #7 exhausted through Stack 100b shall not exceed 3.42 pounds of PM<sub>10</sub> per hour.
- (c) The PM emissions from the two (2) rotoblasts (cleaning mill #3 and #5) exhausted through Stack 100c shall not exceed 5.71 pounds of PM per hour.
- (d) The PM<sub>10</sub> emissions from the two (2) rotoblasts (cleaning mill #3 and #5) exhausted through Stack 100c shall not exceed 3.42 pounds of PM<sub>10</sub> per hour.
- (e) **Cleaning mill #3 is not subject to any PM or PM<sub>10</sub> emission limits to render PSD not applicable when operated without cleaning mills #5 or #7 since cleaning mill #3 was installed in 1968 prior to applicability date of 326 IAC 2-2 (Prevention of Significant Deterioration (PSD)).**

**Comment 18:**

Section D.3.4(a)

Condition D.3.1(a) which concerns the Tundish ladle equipment was erroneously included under the Condition D.3.4(a) testing requirement which pertains only to shotblaster exhausts. The reference to Condition D.3.1(a) should be deleted.

**Response 18:**

The cite has been corrected to reference the allowable PM emission rates for the shot blasters in Condition D.3.1(g) and retain the cite to Condition D.3.2 for PM<sub>10</sub> emission rates for the shot blasters as follows:

**D.3.4 Testing Requirements [326 IAC 2-7-6(1),(6)] [326 IAC 2-1.1-11]**

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- (a) Within 36 months after issuance of this permit, in order to demonstrate compliance with Conditions D.3.1(g) and D.3.2, the Permittee shall perform PM and PM<sub>10</sub> testing of the exhaust stacks serving two (2) of the three (3) shot blasters (Stack 100a or b and c) utilizing methods as approved by the Commissioner. This test shall be repeated at least once every five (5) years from the date of this valid compliance demonstration. PM<sub>10</sub> includes filterable and condensable PM<sub>10</sub>. Testing shall be conducted in accordance with Section C- Performance Testing.

**Comment 19:**

Section D.3.4 (b)

This section needs to be revised to specify the testing date allowed by IDEM's extension to the testing time frame, per Dana's written request. IDEM provided Dana with a 1-month extension to the time frame specified in the construction permit for the #7 cleaning mill. The Cleaning Mill #7 was tested on November 7, 2001 in compliance with Section C-Performance Testing. In addition, the reference to

Condition D.3.1 (f) should be corrected to D.3.1 (g). Condition D.3.4(b) should be revised as follows:

~~Pursuant to Source Modification 177-12987, issued March 9, 2001, during the period between 60 and 180 days after Cleaning Mill #7 is in operation, and as extended by IDEM to include the testing date on November 7, 2001, the November 7, 2001 PM testing of Cleaning Mill #7 satisfied the Source Modification testing requirement and demonstrated compliance with Condition D.3.1(g) in order to demonstrate compliance with Condition D.3.1 (g), the Permittee shall perform ---~~

**Response 19:**

As the results of the stack testing were not communicated prior to the beginning of the 30-day Public Comment Period which started on December 17, 2001, Condition D.3.4 has been revised as the stack test on November 7, 2001 was a valid stack test as follows:

**D.3.4 Testing Requirements [326 IAC 2-7-6(1),(6)] [326 IAC 2-1.1-11]**

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- (b) ~~Pursuant to Source Modification 177-12987, issued March 9, 2001, during the period between 60 and 180 days after cleaning mill #7 is in operation, in order T~~to demonstrate compliance with Condition D.3.1(f), ~~the Permittee shall perform PM testing~~ **a compliance stack test of PM of cleaning mill #7 shall be performed between January 2006 and November 7, 2006, which corresponds to five (5) years since the latest valid stack test,** of utilizing methods as approved by the Commissioner. This test shall be repeated at least once every five (5) years from the date of this valid compliance demonstration. Testing shall be conducted in accordance with Section C- Performance Testing.

**Comment 20:**

Sections D.3.9 (a) and (b), and D.3.11(b)(1) and (2)

The IDEM has extensively reworded these sections compared to the reasonable language discussed and negotiated in the previous draft permits for the past several years, including the April 2001 version. The previous language would have allowed processes to continue operating in situations where the associated baghouse can be repaired without shutting down the baghouse. The revised language in the new sections does not allow operation to continue during any baghouse repairs. (For example, pressure gauge or solenoid valve failure would not require shutting down a baghouse, but under the current draft such failure could require shutdown of the baghouse.) Please revise Conditions D.3.9 (a) and (b) and D.3.11(b)(1) and (2) by inserting the following sentence after the first sentence of each paragraph:

A failed compartment or unit for purposes of this section does not include the equipment or instruments associated with the baghouse, such as the pressure gauge, solenoid valve, and rotary or placo valve, which can be repaired or replaced without shutting down the baghouse.

**Response 20:**

Condition D.3.9(b) and D.3.11(b)(2) have been revised in Response 5. Condition D.3.9(a) and D.3.11(b)(1) for multi-compartment baghouses does not need to have wording added to these conditions since the conditions states that if "bag" failure occurs, not failure of a pressure gauge, etc. that the "affected compartments" shall be shut down. For example, if a pressure gauge breaks, there really aren't any "affected compartments" to shut down.

Upon further review, the OAQ has decided to make the following changes to the Part 70 Operating Permit: The permit language is changed to read as follows (deleted language appears as ~~strikeouts~~, new language is **bolded**):

The following updates have been made to incorporate the Article 2 rule revisions that were adopted on October 3, 2001, and became effective on January 19, 2002. For more information about this rulemaking, refer to the October 2001 Air Pollution Control Board Packet which can be found on the Internet at <http://www.state.in.us/idem/air/rules/apcb/packets/index.html>. The rule revisions were published in the February 1, 2002 Indiana Register which can be found on the Internet at <http://www.IN.gov/legislative/register/index-25.html>.

#### Change 1:

Condition B.2 has had the rule cite 326 IAC 2-1.1-9.5 added to include the new promulgated rule which clarifies when permits expire and when conditions in previous issued permits are superseded as follows:

##### **B.2 Permit Term [326 IAC 2-7-5(2)] [326 IAC 2-1.1-9.5]**

This permit is issued for a fixed term of five (5) years from the original date, as determined in accordance with IC 4-21.5-3-5(f) and IC 13-15-5-3. Subsequent revisions, modifications, or amendments of this permit do not affect the expiration date.

#### Change 2:

Condition B.12 Emergency Provisions (a), (b) and (g) have been revised to reflect rule changes to 326 IAC 2-7-16. This section of the rule is now consistent with 40 CFR 70.6(g) and provides an affirmative defense to an action brought for non-compliance with technology-based emission limitations only. The condition is changed as follows:

##### **B.12 Emergency Provisions [326 IAC 2-7-16]**

- (a) An emergency, as defined in 326 IAC 2-7-1(12), is not an affirmative defense for an action brought for noncompliance with a federal or state health-based emission limitation, ~~except as provided in 326 IAC 2-7-16.~~
- (b) An emergency, as defined in 326 IAC 2-7-1(12), constitutes an affirmative defense to an action brought for noncompliance with a ~~health-based or~~ technology-based emission limitation if the affirmative defense of an emergency is demonstrated through properly signed, contemporaneous operating logs or other relevant evidence that describe the following:
- (g) ~~Operations may continue during an emergency only if the following conditions are met:~~
  - (1) ~~—If the emergency situation causes a deviation from a technology-based limit, the Permittee may continue to operate the affected emitting facilities during the emergency provided the Permittee immediately takes all reasonable steps to correct the emergency and minimize emissions.~~
  - (2) ~~—If an emergency situation causes a deviation from a health-based limit, the Permittee may not continue to operate the affected emissions facilities unless:~~
    - (A) ~~—The Permittee immediately takes all reasonable steps to correct the emergency situation and to minimize emissions; and~~

~~(B) — Continued operation of the facilities is necessary to prevent imminent injury to persons, severe damage to equipment, substantial loss of capital investment, or loss of product or raw materials of substantial economic value.~~

~~Any operation shall continue no longer than the minimum time required to prevent the situations identified in (g)(2)(B) of this condition.~~

**Change 3:**

Condition B.14 Multiple Exceedances has been deleted because 326 IAC 2-7-5(1)(E) has been repealed since it conflicted with 40 CFR 70.6(a)(6) as follows:

~~**B.14 Multiple Exceedances [326 IAC 2-7-5(1)(E)]**~~

~~Any exceedance of a permit limitation or condition contained in this permit, which occurs contemporaneously with an exceedance of an associated surrogate or operating parameter established to detect or assure compliance with that limit or condition, both arising out of the same act or occurrence, shall constitute a single potential violation of this permit.~~

**Change 4:**

Condition B.14 Prior Permits Superseded was added to the proposed permit to implement the intent of the new rule 326 IAC 2-1.1-9.5 as follows:

**B.14 Prior Permits Superseded [326 IAC 2-1.1-9.5]**

- (a) All terms and conditions of previous permits issued pursuant to permitting programs approved into the state implementation plan have been either
- (1) incorporated as originally stated,
  - (2) revised, or
  - (3) deleted
- by this permit.
- (b) All previous registrations and permits are superseded by this permit.

**Change 5:**

Paragraph (b) of Condition B.13 Permit Shield has been deleted because this paragraph is no longer necessary due to the addition of the new Condition B.14 Prior Permits Superseded as follows:

~~**B.13 Permit Shield [326 IAC 2-7-15] [326 IAC 2-7-20] [326 IAC 2-7-12]**~~

~~(b) — This permit shall be used as the primary document for determining compliance with applicable requirements established by previously issued permits. All previously issued operating permits are superseded by this permit.~~

**Change 6:**

IDEM, OAQ has revised Condition C.13 since a percentage change in pH is not as appropriate as the

routinely calibrating the pH meter. The wording has been revised and also incorporate flow measurements as follows:

C.13 Pressure Gauge and Other Instrument Specifications [326 IAC. 2-1.1-11] [326 IAC 2-7-5(3)] [326 IAC 2-7-6(1)]

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- (a) Whenever a condition in this permit requires the measurement of pressure drop across any part of the unit or its control device, the gauge employed shall have a scale such that the expected normal reading shall be no less than twenty percent (20%) of full scale and be accurate within plus or minus two percent (  $\pm 2\%$ ) of full scale reading.
- (b) **Whenever a condition in this permit requires the measurement of a temperature or flow rate, the instrument employed shall have a scale such that the expected normal reading shall be no less than twenty percent (20%) of full scale and be accurate within plus or minus two percent (  $\pm 2\%$ ) of full scale reading.**
- (c) **The Preventive Maintenance Plan for the pH meter shall include calibration using known standards. The frequency of calibration shall be adjusted such that the typical error found at calibration is less than one pH point.**
- (db) The Permittee may request the IDEM, OAQ approve the use of a pressure gauge or other instrument that does not meet the above specifications provided the Permittee can demonstrate an alternative pressure gauge or other instrument specification will adequately ensure compliance with permit conditions requiring the measurement of pressure drop or other parameters.

**Change 7:**

In paragraph (c)(2) of Condition C.16, now renamed Compliance Response Plan - Preparation, Implementation, Records, and Reports, "administrative amendment" has been revised to "minor permit modification," because 326 IAC 2-7-11(a)(7) has been repealed. Requests that do not involve significant changes to monitoring, reporting, or record keeping requirements may now be approved as minor permit modifications. References to this condition throughout the proposed permit have been revised to reflect the name change of this condition as follows:

Also paragraph (b)(4) of Condition C.16 has been revised to be consistent with Responses 5 and 7 that changed the word "violation" to "deviation" as follows:

C.16 Compliance Response Plan - ~~Failure to Take Response Steps~~ **Preparation, Implementation, Records, and Reports** [326 IAC 2-7-5] [326 IAC 2-7-6]

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- (b) For each compliance monitoring condition of this permit, reasonable response steps shall be taken when indicated by the provisions of that compliance monitoring condition as follows:
  - (1) Reasonable response steps shall be taken as set forth in the Permittee's current Compliance Response Plan; or
  - (2) If none of the reasonable response steps listed in the Compliance Response Plan is applicable or responsive to the excursion, the Permittee shall devise and implement additional response steps as expeditiously as practical. Taking such additional response steps shall not be considered a deviation from this permit so long as the Permittee documents such response steps in accordance with this condition.
  - (3) If the Permittee determines that additional response steps would necessitate that the emissions unit or control device be shut down, the IDEM, OAQ shall be promptly

notified of the expected date of the shut down, the status of the applicable compliance monitoring parameter with respect to normal, and the results of the actions taken up to the time of notification.

- (4) Failure to take reasonable response steps shall constitute a ~~violation~~ **deviation** of the permit.
- (c) The Permittee is not required to take any further response steps for any of the following reasons:
  - (1) A false reading occurs due to the malfunction of the monitoring equipment and prompt action was taken to correct the monitoring equipment.
  - (2) The Permittee has determined that the compliance monitoring parameters established in the permit conditions are technically inappropriate, has previously submitted a request for ~~an administrative amendment~~ **a minor permit modification** to the permit, and such request has not been denied.



## **Indiana Department of Environmental Management Office of Air Quality**

### **Technical Support Document (TSD) for a Part 70 Operating Permit**

#### **Source Background and Description**

<b>Source Name:</b>	<b>Richmond Liner Foundry and Machining Plant, Perfect Circle Division, Dana Corporation</b>
<b>Source Location:</b>	<b>2153 and 2175 Williamsburg Pike, Richmond, Indiana 47375</b>
<b>County:</b>	<b>Wayne</b>
<b>SIC Code:</b>	<b>3321, 3398 and 3592</b>
<b>Operation Permit No.:</b>	<b>T 177-6887-00090</b>
<b>Permit Reviewer:</b>	<b>Mark L. Kramer</b>

The Office of Air Quality (OAQ) has reviewed a Part 70 permit application from Richmond Liner Foundry and Machining Plant, Perfect Circle Division, Dana Corporation, relating to the operation of an iron sleeve casting and machining source.

#### **Source Definition**

This iron sleeve casting and machining source consists of two (2) plants:

- (a) Plant 1 is located at 2153 Williamsburg Pike; Richmond, Indiana (177-00004), and
- (b) Plant 2 is located at 2175 Williamsburg Pike, Richmond, Indiana (177-00013).

Since these two (2) plants are located on contiguous properties, are owned by one (1) company, and together produce products for shipment to their customers, they were considered one (1) source located at 2153 and 2175 Williamsburg Pike, Richmond, Indiana pursuant to 177-11453-00090, issued on November 17, 1999. The individual plant identification numbers of 00004 and 00013 have been replaced by the combined plant identification number of 00090. The source and OAQ inspector assigned to the source have been informed of this source evaluation.

#### **Permitted Emission Units and Pollution Control Equipment**

The source consists of the following permitted emission units and pollution control devices:

- (a) Two (2) alternating cupolas, known as Unit ID 010, (only one (1) operates at a time) installed in 1960, each equipped with a venturi scrubber system, known as Unit ID VS#10, consisting of two (2) natural gas-fired afterburners with propane as a back-up fuel for CO control, rated at 8.0 million British thermal units per hour, each, one (1) quencher tank, one (1) venturi scrubber and demister, exhausted through Stack 010, capacity: 12.8 tons of metal per hour, each.
- (b) Three (3) electric induction melting furnaces (#2, #3, and #4), known as Unit ID 020, equipped with a baghouse, known as Unit ID DC#13, exhausted through Stack 013, installed in 1972, capacity: 3.5 tons of metal per hour, each (baghouse does not have to be operated at all

times).

- (c) One (1) electric induction melting furnace (#1), known as Unit ID 021, installed in 1996, equipped with a baghouse, known as Unit ID DC#13, exhausted through Stack 013, capacity: 4.8 tons of metal per hour (baghouse does not have to be operated at all times).
- (d) Seven (7) electric holding furnaces (40 ton and Group 3 through Group 8 electric holding furnaces) and hot metal transfer ladles, known as Unit ID 030, installed in 1960, exhausted through Stack 030, charging capacity: 23.3 tons of metal per hour, total.
- (e) One (1) electric holding furnace (1996) and hot metal transfer ladles, known as Unit ID 031, exhausted through Stack 031, installed in 1996, capacity: charging 4.8 tons of metal per hour.
- (f) One (1) natural gas indirect-fired burner using propane as a back-up fuel supplying hot blast air to cupola, known as Unit ID 040, exhausted through Stack 040, installed in 1999, capacity: 14.0 million British thermal units per hour.
- (g) One (1) tundish ladle for Group 3 spinner machines and two (2) back-up tundish ladles for magnesium inoculation, known as Unit ID 050, exhausted through Stack 050, installed in 1960, capacity: 40 tons of iron treated per hour.
- (h) One (1) cupola charge handling operation, known as Unit ID 060, exhausted through Stack 060, installed in 1960, capacity: 12.8 tons of metal per hour.
- (i) One (1) electric furnace charge handling operation, known as Unit ID 070, exhausted through Stack 070, installed in 1972, capacity: 10 tons of metal per hour.
- (j) One (1) direct-fired scrap charge pre-heater, known as Unit ID 080, equipped with a baghouse, known as Unit ID DC#13, exhausted through Stack 013 or Stack 080, installed in 1972, capacity: 10 tons of metal per hour (baghouse does not have to be operated at all times).
- (k) Seven (7) centrifugal casting operations, known as Unit ID 090, consisting of three (3) long tube spinners (Group 1), thirty-three (33) regular spinners (Groups 3 through Group 6 and Group 8), equipped with six (6) baghouses, known as DC#1, DC#2A, DC#3, DC#4, and DC#7 & DC#8, exhausting through Stacks 090h, 090g, 090a, 090b, and 090e & 090f, respectively, and one (1) rotary turntable (Group 7), equipped with two (2) baghouses, known as DC#5 & DC#6, exhausting through Stacks 090c and 090d, installed in 1960, capacity: 40 tons of metal per hour, total.
- (l) One (1) longtube 92-inch centrifugal casting machine (spinner #18) (Group 1), known as Unit ID 090, equipped with a baghouse, known as DC#1, exhausting through Stack 090h, installed in 2001, capacity: 1.70 tons of metal per hour.
- (m) Four (4) longtube 60-inch centrifugal casting machines (spinners #41, #43, #45, and #47) (Group 4), Unit ID 090, equipped with a baghouse, known as DC#3, exhausting through Stack 090a, installed in 2001, capacity: 1.11 tons of metal per hour each.
- (n) Three (3) shot blasters, capacity: 30 tons of metal cleaned per hour, total, consisting of:
  - (1) One (1) shot blaster [one (1) hanging conveyORIZED (cleaning mill #1)], known as Unit ID 100, equipped with a baghouse, known as DC#2, equipped with a bag leak

detection system, exhausted through Stack 100a, installed prior to 1969.

- (2) Two (2) rotoblaster (cleaning mill #3 and #5), known as Unit ID 100, equipped with interchangeable baghouses, known as DC#10 and DC#9, each equipped with a bag leak detection system, exhausted through Stacks 100b and 100c, installed in 1968 and 1978, respectively.
- (o) One (1) pangborn ES-2029-1\S000203 rotoblast cabinet (cleaning mill #7), known as Unit ID 100, equipped with an interchangeable baghouse, known as DC#10 or DC#9, each equipped with a bag leak detection system, exhausting through Stack 100b, installed in 2001, capacity: 13.0 tons of metal per hour, blast rate 80.75 tons of cast steel shot per hour.

### **Unpermitted Emission Units and Pollution Control Equipment**

There are no unpermitted facilities operating at this source during this review process.

### **New Emission Units and Pollution Control Equipment Receiving Advanced Source Modification Approval**

There are no new facilities proposed at this source during this review process. However, the use of propane fuel was assessed as an alternative fuel in the two (2) cupola afterburners.

### **Emission Units and Pollution Control Equipment Removed**

The following facilities have been removed from the source and are not included in the proposed permit:

- (a) Degreasing station, previously known as Unit ID 110.
- (b) Hard chromium plating operation, previously known as Unit ID 120.
- (c) Dry ring machining operations, previously known as Unit ID 130.

### **Insignificant Activities**

The source also consists of the following insignificant activities, as defined in 326 IAC 2-7-1(21):

- (a) Degreasing operations that do not exceed 145 gallons per 12 months, except if subject to 326 IAC 20-6. (326 IAC 8-2-3 and/or 326 IAC 8-3-5(a))
- (b) Any of the following structural steel and bridge fabrication activities: Cutting 200,000 linear feet or less of one inch (1") plate or equivalent; using 80 tons or less of welding consumables. (326 IAC 6-1)
- (c) Trimmers that do not produce fugitive emissions and that are equipped with a dust collection or trim material recovery device such as a bag filter or cyclone. (326 IAC 6-1)
- (d) Conveyors as follows: Covered conveyors for coal or coke conveying of less than or equal to 360 tons per day; Covered conveyors for limestone conveying of less than or equal to 7,200 tons per day for sources other than mineral processing plants constructed after August 31, 1983. (326 IAC 6-1)

- (e) Grinding and machining operations controlled with fabric filters, scrubbers, mist collectors, wet collectors and electrostatic precipitators with a design grain loading of less than or equal to 0.03 grains per actual cubic foot and a gas flow rate less than or equal to 4,000 actual cubic feet per minute, including the following: deburring; buffing; polishing; abrasive blasting; and pneumatic conveying operations including the following:
  - One (1) wet liner machining lathing operation controlled by a baghouse dust collector with a gas flow rate of 2,000 actual cubic feet per minute. (326 IAC 6-1)
- (f) Iron manganese phosphating operation (Lubrite). (326 IAC 6-1)
- (g) One (1) CNC lathe machining operation, equipped with a baghouse, known as DC#12. (326 IAC 6-1)
- (h) Natural gas-fired combustion sources with heat input equal to or less than ten million (10,000,000) British thermal units per hour.
- (i) Propane for liquefied petroleum gas, or butane-fired combustion sources with heat input equal to or less than six million (6,000,000) British thermal units per hour.
- (j) Equipment powered by internal combustion engines of capacity equal to or less than 500,000 British thermal units per hour, except where total capacity of equipment operated by one stationary source exceeds 2,000,000 British thermal units per hour.
- (k) Combustion source flame safety purging on startup.
- (l) A petroleum fuel, other than gasoline, dispensing facility, having a storage capacity of less than or equal to 10,500 gallons, and dispensing less than or equal to 230,000 gallons per month.
- (m) The following VOC and HAP storage containers: Storage tanks with capacity less than or equal to 1,000 gallons and annual throughputs less than 12,000 gallons; vessels storing lubricating oil, hydraulic oils, machining oils, and machining fluids.
- (n) Refractory storage not requiring air pollution control equipment.
- (o) Application of oils, greases lubricants or other nonvolatile materials applied as temporary protective coatings.
- (p) Machining where an aqueous cutting coolant continuously floods the machining interface.
- (q) Closed loop heating and cooling systems.
- (r) Groundwater oil recovery wells.
- (s) Activities associated with the treatment of wastewater streams with an oil and grease content less than or equal to 1 percent by volume.
- (t) Any operation using aqueous solutions containing less than 1 percent by weight of VOCs excluding HAPs.

- (u) Noncontact cooling tower systems with the following: Forced and induced draft cooling tower system not regulated under a NESHAP.
- (v) Quenching operations used with heat treating processes.
- (w) Replacement or repair of electrostatic precipitators, bags in baghouses and filters in other air filtration equipment.
- (x) Heat exchanger cleaning and repair.
- (y) Stockpiled soils from soil remediation activities that are covered and waiting transport for disposal.
- (z) Paved and unpaved roads and parking lots with public access.
- (aa) Purging of gas lines and vessels that is related to routine maintenance and repair of buildings, structures, or vehicles at the source where air emissions from those activities would not be associated with any production process.
- (bb) Blowdown for any of the following: sight glass; boiler; compressors; pumps; and cooling tower.
- (cc) Furnaces used for melting metals other than beryllium with a brim full capacity of less than or equal to 450 cubic inches by volume.
- (dd) On-site fire and emergency response training approved by the department.
- (ee) Emergency generators as follows: Diesel generators not exceeding 1,600 horsepower.
- (ff) Purge double block and bleed valves.
- (gg) Mold release agents using low volatile products (vapor pressure less than or equal to 2 kiloPascals measured at 38EC).
- (hh) A laboratory as defined in 326 IAC IAC 2-7-1(21)(D).
- (ii) Heat treat furnaces and quenching operations; groundwater remediation air stripper; zinc phosphate coating operation; honing washer and honing stone/glue preheater; molybdenum coating spray and blast; parts cleaners - maintenance degreasing; paved roadways; unpaved roadways; storage piles (raw material and solid waste); solid waste landfill; on-site remediation activities.
- (jj) Mold release spray mixing area below 5 pounds per hour and 25 pounds per day of particulate matter.

### Existing Approvals

The source has been operating under previous approvals including, but not limited to, the following:

- (a) Operation Permit No OP 89-06-87-0171, issued on July 12, 1984;
- (b) Operation Permit No. OP 89-10-88-0182, issued on November 26, 1986;

- (c) Operation Permit No. OP 89-10-88-0183, issued on November 26, 1986;
- (d) CP 177-6425, issued on November 12, 1996;
- (e) CP 177-10033-00004, issued on October 14, 1998;
- (f) Agreed Orders A-3569, issued November 14, 1996 and A-4238 dated January 11, 1999;
- (g) MSM 177-11453-00090, issued on November 17, 1999; and
- (h) MSM 177-12987-00090, issued on March 9, 2001.

All conditions from previous approvals were incorporated into this Part 70 permit except the following:

- (a) Operation Permit No OP 89-06-87-0171 issued on July 12, 1984.

Emissions shall be at a level acceptable to 325 IAC 6-3.

Reason not incorporated: 326 IAC 6-3 does not apply because the source-wide potential PM exceeds one hundred (100) tons per year in Wayne County, and therefore all facilities are subject to 326 IAC 6-1 even though the individual facility's PM potential may be less than one hundred (100) tons per year.

- (b) Operation Permit No. OP 89-10-88-0182 issued on November 26, 1986.

Condition No 5: The particulate matter emissions from the boilers shall be limited to 0.8 pounds per million British thermal units according to 325 IAC 6-2.1.

Condition No. 6: That the particulate matter emissions from wet grinding, plating and dry machining shall comply with 325 IAC 6-3.

Reason not incorporated: 326 IAC 6-3 does not apply because 326 IAC 6-1 applies.

- (c) CP 177-6425 issued November 12, 1996.

Condition 10: That pursuant to 326 IAC 6-3 and 326 IAC 2-2 that the combined PM emissions from the electric induction melting and holding furnaces shall not exceed the allowable particulate matter (PM) emission rate of 4.59 pounds per hour.

Reason not incorporated: 326 IAC 6-3 does not apply because 326 IAC 6-1 applies.

#### **Enforcement Issue**

- (a) IDEM is aware that the tundish ladles, known as Unit ID 050, is not in compliance with the following emission limitation:

326 IAC 6-1-2(a)

Pursuant to 326 IAC 6-1-2(a) General sources: Facilities not limited by subsections (b) through (g) of this section shall not allow or permit discharge to the atmosphere of any gases which contain particulate matter in excess of 0.07 gram per dry standard cubic meter (g/dscm) (0.03

grain per dry standard cubic foot (dscf)). Where this limitation is more stringent than the applicable limitations of subsections (b) through (g) of this section, for facilities in existence prior to the applicability dates, or of a size not applicable to said subsections, emission limitations for those facilities shall be determined by the commissioner and will be established in accordance with the procedures set forth in subsection (h) of this section.

- (b) IDEM is reviewing this matter and has taken appropriate action. The compliance schedule in this proposed permit will satisfy the requirements of the above stated requirement.

### Recommendation

The staff recommends to the Commissioner that the Part 70 permit be approved. This recommendation is based on the following facts and conditions:

Unless otherwise stated, information used in this review was derived from the application and additional information submitted by the applicant.

An administratively complete Part 70 permit application for the purposes of this review was received on October 11, 1996. Additional information was received on October 21, 1997, January 2, April 8, September 21, October 3, 15, 28, 29 and 30, 1998, March 13, April 3 and 24, June 15, August 7, 16 and 30, as well as October 9, 2001

A notice of completeness letter was mailed to the source on October 29, 1996.

### Emission Calculations

See pages 1 through 9 of Appendix A of this document for detailed emissions calculations.

### Potential To Emit

Pursuant to 326 IAC 2-1.1-1(16), Potential to Emit is defined as "the maximum capacity of a stationary source to emit any air pollutant under its physical and operational design. Any physical or operational limitation on the capacity of a source to emit an air pollutant, including air pollution control equipment and restrictions on hours of operation or type or amount of material combusted, stored, or processed shall be treated as part of its design if the limitation is enforceable by the U. S. EPA."

This table reflects the PTE before controls. Control equipment is not considered federally enforceable until it has been required in a federally enforceable permit.

Pollutant	Potential Emissions (tons/year)
PM	7,944
PM <sub>10</sub>	5,349
SO <sub>2</sub>	71.4
VOC	13.3
CO	8,164

NO <sub>x</sub>	61.4
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Note: For the purpose of determining Title V applicability for particulates, PM<sub>10</sub>, not PM, is the regulated pollutant in consideration.



HAPs	Potential To Emit (tons/year)
Lead	151
Manganese Compounds	125
Chromium Compounds	10.3
Nickel Compounds	6.61
Benzene	0.0009
Dichlorobenzene	0.0005
Formaldehyde	0.031
Hexane	0.751
Toluene	0.001
Cadmium Compounds	0.0005
TOTAL	294

- (a) The potential to emit (as defined in 326 IAC 2-1.1-1(16)) of PM<sub>10</sub> and CO are equal to or greater than one hundred (100) tons per year. Therefore, the source is subject to the provisions of 326 IAC 2-7.
- (b) The potential to emit (as defined in 326 IAC 2-1.1-1(16)) of any single HAP is equal to or greater than ten (10) tons per year and the potential to emit (as defined in 326 IAC 2-7-1(29)) of a combination HAPs is greater than or equal to twenty-five (25) tons per year. Therefore, the source is subject to the provisions of 326 IAC 2-7.
- (c) Fugitive Emissions

Since this type of operation is one of the 28 listed source categories under 326 IAC 2-2 and even though there are no applicable New Source Performance Standards that were in effect on August 7, 1980, the fugitive emissions are counted toward determination of PSD and Emission Offset applicability.

### Actual Emissions

The following table shows the actual emissions from the source. This information reflects the 1999 OAQ emission data.

Pollutant	Actual Emissions (tons/year)
PM	not reported
PM <sub>10</sub>	32.7
SO <sub>2</sub>	25.6
VOC	4.07

Pollutant	Actual Emissions (tons/year)
CO	315
NO <sub>x</sub>	6.38
Lead	0.932
Toluene	0.0001
Formaldehyde	0.003
Benzene	0.00009
Chromium Compounds	0.053
Manganese Compounds	0.310
Nickel Compounds	0.030

#### Potential to Emit After Issuance

The table below summarizes the potential to emit, reflecting all limits, of the significant emission units after controls. The control equipment is considered federally enforceable only after issuance of this Part 70 Operating Permit.

	Limited Potential to Emit (tons/year)						
Process/facility	PM	PM <sub>10</sub>	SO <sub>2</sub>	VOC	CO	NO <sub>x</sub>	HAPs
010	51.5	51.5	70.1	10.1	813	5.61	5.35
020	41.4	39.6	-	-	-	-	2.22
021	14.1	13.5	-	-	-	-	0.759
030	5.72	5.72	-	-	-	-	0.058
031	1.18	1.18	-	-	-	-	0.012
050	48.8*	48.8	0.876	-	-	-	0.778
060	13.5	20.2	-	-	-	-	-
070	13.1	15.8	-	-	-	-	-
080	8.76	8.76	-	-	-	-	-
090	7.45	7.45	-	-	-	-	0.075
100	57.3	6.29	-	-	-	-	0.639
Combustion 010	0.460	0.533	0.616	0.385	5.89	14.6	0.248
Combustion 040	0.402	0.466	0.539	0.337	5.15	12.7	
Fugitives 060 & 070	4.49 4.38	4.49 4.38	-	-	-	-	-

	Limited Potential to Emit (tons/year)						
Process/facility	PM	PM <sub>10</sub>	SO <sub>2</sub>	VOC	CO	NO <sub>x</sub>	HAPs
Insignificant Activities Wet Liner Machining/ Lathing	1.95	1.95	-	-	-	-	-
Insignificant Activities Natural Gas Combustion	0.543	2.17	0.171	1.57	24.0	28.6	0.539
Dry Lathe Machining Operation	0.002	0.002	-	-	-	-	-
Coke and Stone Conveyor	0.0001	0.0003	-	-	-	-	-
Total Emissions	270	228	72.3	12.4	848	61.5	10.7

\* Allowable PM emission rate of 0.03 grains per dry standard cubic foot of exhaust air for the tundish ladles is pursuant to 326 IAC 6-1-2. PM<sub>10</sub> set equal to PM.

### County Attainment Status

The source is located in Wayne County.

Pollutant	Status
PM <sub>10</sub>	attainment
SO <sub>2</sub>	attainment
NO <sub>2</sub>	attainment
Ozone	attainment
CO	attainment
Lead	attainment

- (a) Volatile organic compounds (VOC) and oxides of nitrogen (NO<sub>x</sub>) are precursors for the formation of ozone. Therefore, VOC and NO<sub>x</sub> emissions are considered when evaluating the rule applicability relating to the ozone standards. Wayne County has been designated as attainment or unclassifiable for ozone. Therefore, VOC and NO<sub>x</sub> emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2 and 40 CFR 52.21.
- (b) Wayne County has been classified as attainment or unclassifiable for all remaining criteria pollutants. Therefore, these emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2 and 40 CFR 52.21.



## **Part 70 Permit Conditions**

This source is subject to the requirements of 326 IAC 2-7, pursuant to which the source has to meet the following:

- (a) Emission limitations and standards, including those operational requirements and limitations that assure compliance with all applicable requirements at the time of issuance of Part 70 permits.
- (b) Monitoring and related record keeping requirements which assume that all reasonable information is provided to evaluate continuous compliance with the applicable requirements.

## **Federal Rule Applicability**

- (a) Although this Part 70 does involve a pollutant-specific emissions unit with the potential to emit after control in an amount equal to or greater than one hundred (100) tons per year, the Title V permit application was received on October 11, 1996, before the April 20, 1998 applicability date. Therefore, the requirements of 40 CFR Part 64, Compliance Assurance Monitoring, are not applicable.
- (a) There are no New Source Performance Standards (NSPS) (326 IAC 12 and 40 CFR Part 60) applicable to this source.
- (b) There are no National Emission Standards for Hazardous Air Pollutants (NESHAPs) (326 IAC 14 and 40 CFR Part 63) applicable to this source.

## **State Rule Applicability - Entire Source**

### **326 IAC 2-2 (Prevention of Significant Deterioration)**

This source is an existing major PSD source and is one of the 28 listed source categories that has not been subject to review under PSD rules.

### **326 IAC 2-6 (Emission Reporting)**

This source is subject to 326 IAC 2-6 (Emission Reporting), because it has the potential to emit more than one hundred (100) tons per year of PM<sub>10</sub> and CO. Pursuant to this rule, the owner/ operator of the source must annually submit an emission statement for the source. The annual statement must be received by July 1 of each year and contain the minimum requirement as specified in 326 IAC 2-6-4. The submittal should cover the period defined in 326 IAC 2-6-2(8) (Emission Statement Operating Year).

### **326 IAC 5-1 (Opacity Emissions Limitations)**

Pursuant to 326 IAC 5-1-2 (Opacity Limitations), except as provided in 326 IAC 5-1-3 (Temporary alternative opacity limitations), opacity shall meet the following, unless otherwise stated in this permit:

- (a) Opacity shall not exceed an average of forty percent (40%) any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.
- (b) Opacity shall not exceed sixty percent (60%) for more than a cumulative total of fifteen (15)

minutes (sixty (60) readings as measured according to 40 CFR Part 60, Appendix A, Method 9 or fifteen (15) one (1) minute nonoverlapping integrated averages for a continuous opacity monitor) in a six (6) hour period.

#### 326 IAC 6-4 (Fugitive Dust Emissions)

Pursuant to 326 IAC 6-4 (Fugitive Dust Emissions), visible emissions shall not cross the property line of the source at or near ground level.

#### State Rule Applicability - Individual Facilities

##### 326 IAC 2-2 (Prevention of Significant Deterioration (PSD))

The following limits are required to make the requirements of this rule not applicable.

(a) Electric Induction Melting Furnace (Unit ID 021)

- (1) The PM<sub>10</sub> emissions from the electric induction melting furnace (Unit ID 021) shall not exceed 4.128 pounds per hour, and
- (2) The input of grey iron to the electric induction melting furnace (Unit ID 021) shall be limited to 31,392 tons per twelve (12) consecutive month period. Therefore, the requirements of 326 IAC 2-2 are not applicable.

(b) Shot Blasters - Cleaning Mills #3, #5 and #7 (Unit ID 100)

The hourly PM and PM<sub>10</sub> emission rates for Stack 100b need to assure that when only cleaning mill #7 constructed in 2001 exhausts through Stack 100b, the allowable PM and PM<sub>10</sub> emission rates render the requirements of 326 IAC 2-2 not applicable. Similarly, the allowable PM and PM<sub>10</sub> emission rates for Stack 100c for cleaning mills #3 and #5, constructed in 1968 and 1978 need to assure that when only cleaning mill #5 constructed in 1978 exhausts through Stack 100b, the allowable PM and PM<sub>10</sub> emission rates render the requirements of 326 IAC 2-2 not applicable. The source has requested flexibility in using two (2) cleaning mills exhausting through a given stack. This flexibility does not mean that only two (2) cleaning mills can operate at the same time, that is, there are no conditions in the proposed permit that prohibit the operation of all three (3) cleaning mills at the same time, but the PM and PM<sub>10</sub> emission rates shall comply with the following and those specified pursuant to 326 IAC 6-1.

- (1) The PM emissions from any two (2) of the three (3) cleaning mills #3, #5 or #7 exhausted through Stack 100b shall not exceed 5.71 pounds of PM per hour, equivalent to less than twenty-five (25) tons per year.
- (2) The PM<sub>10</sub> emissions from any two (2) of the three (3) cleaning mills #3, #5 or #7 exhausted through Stack 100b shall not exceed 3.42 pounds of PM<sub>10</sub> per hour, equivalent to less than fifteen (15) tons per year.
- (3) The PM emissions from the two (2) rotoblaster (cleaning mill #3 and #5) exhausted through Stack 100c shall not exceed 5.71 pounds of PM per hour, equivalent to less than twenty-five (25) tons per year.

- (4) The PM<sub>10</sub> emissions from the two (2) rotoblasts (cleaning mill #3 and #5) exhausted through Stack 100c shall not exceed 3.42 pounds of PM<sub>10</sub> per hour, equivalent to less than fifteen (15) tons per year.

326 IAC 6-1-14 (Nonattainment area particulate limitations: Wayne County)

The two (2) 12.8 ton cupolas (Unit ID 010) have PM limits pursuant to OP 89-06-87-0171 issued on July 12, 1984 and 326 IAC 6-1-14. Pursuant to 326 IAC 6-1-14, the particulate matter emissions from the cupolas are limited to 51.50 tons per year and 0.133 grains per dry standard cubic foot. Based on a flow rate of 32,000 actual cubic feet per minute and an allowable grain loading of 0.133 dry standard cubic feet per minute, the allowable hourly PM emission rate = 0.133 dscf \* 32,000 scfm \* 1 lb/7000 grains \* 60 min/hr = 36.5 pounds per hour compared to a controlled emission rate of 22.8 pounds per hour. Therefore, both cupolas comply with this rule.

326 IAC 6-1 (Nonattainment area limitations)

Since this source has a potential PM emission rate that exceeds one hundred (100) tons per year and is located in Wayne County, all facilities are subject to this rule. Any facilities not specifically listed in 326 IAC 6-1-14 are subject to 326 IAC 6-1-2 (a) or (e). Since the two (2) cupolas (Unit ID 040) are cited in 326 IAC 6-1-14, 326 IAC 6-1-2 (e)(1) does not apply to these cupolas.

326 IAC 6-1-2(e)(2) limits particulate matter emissions from any melting process at a grey iron foundry, excluding cupolas, to not exceed 0.07 grains per dry standard cubic foot of exhaust air. This rule applies to the three (3) electric induction melting furnaces (Unit ID 020) and the one (1) electric induction melting furnace (Unit ID 021). All other facilities at this grey iron foundry are subject to 326 IAC 6-1-2(a) which limits particulate matter emissions not to exceed 0.03 grains per dry standard cubic foot of exhaust air. Page 9 of 9 of Appendix A shows the calculations of the allowable particulate matter emissions which are summarized in the following table:

Operation	Allowable grain loading (grains/dscf)	Allowable PM Emission Rate (pounds per hour)		Potential PM Emission Rate After Controls (pounds per hour)
Three (3) electric induction furnaces (Unit ID 020)	0.07	20a	11.5	9.45
		20b	11.5	
One (1) electric furnace (Unit ID 021)	0.07	20a/b	11.5	4.32
Seven (7) electric holding furnaces (Unit ID 030)	0.03		4.98	1.31
One (1) electric holding furnace (Unit ID 031)	0.03		1.00	0.269
Natural gas/propane-fired burner (Unit ID 040)	0.03		0.288	0.092
Tundish ladles (Unit ID 050)	0.03		11.1	17.5
Cupola charge handling (Unit ID 060)	0.03		4.95	3.07

Operation	Allowable grain loading (grains/dscf)	Allowable PM Emission Rate (pounds per hour)	Potential PM Emission Rate After Controls (pounds per hour)
Electric furnace charge handling (Unit ID 070)	0.03	4.95	3.00
Scrap pre-heater (Unit ID 080)	0.03	4.38	2.00
Seven (7) centrifugal casting operations (Unit ID 090)	0.03	90a 4.77 90b 0.835 90c 0.740 90d 0.740 90e 0.835 90f 0.740 90g 0.740 90h 0.883	0.213 0.213 0.213 0.213 0.213 0.213 0.213 0.213 Total = 1.70
Four (4) shot blasters (Unit ID 100) Mill #1 Mill #7 (DC#9 or DC#10) Mills #3 & #5 (DC#9 or DC#10) or Mills #3 and #7 (DC#9 or DC#10) Mills #5 and #7 (DC#9 or DC#10)	0.03	100a 3.96 100b 3.96 100c 1.98 100b 3.96 100b 3.96	3.70 3.83 1.85 3.70 3.70
One (1) dry liner machining lathing operation (Unit ID 140)	0.03	2.10	0.445

As shown in the above table, all of the emission units, except the tundish ladles (Unit ID 050) are in compliance with 326 IAC 6-1 has calculated on Pages 1 - 6 of 9 of Appendix A. Use of the control devices as indicated in the equipment list and reflected in the control efficiencies in the spreadsheet will assure compliance for those emissions with control devices. In addition, it should be noted that no more than two (2) of the three (3) cleaning mills (#3, #5 or #7) will be allowed to be controlled by baghouse DC#9 or DC#10 at anytime.

#### 326 IAC 7-1.1-2 (Sulfur dioxide emission limitations: specified)

Although the alternating cupolas, Unit ID 010, emit SO<sub>2</sub> at a rate that exceeds twenty-five (25) tons per year, 326 IAC 7-1.1-2 refers to a limit for coal; but since coke is a residual of coal left after destructive distillation, the rule does not apply to coke. Therefore, the sulfur dioxide (SO<sub>2</sub>) emissions from the two (2) cupolas due to combustion of coke are exempt from this rule.

#### 326 IAC 8 (Volatile Organic Compound Rules)

There are no 326 IAC 8 rules that apply to individual facilities or the source. Total potential VOC emissions from the source are less than twenty-five (25) tons per year.

#### 326 IAC 9-1 (Carbon Monoxide Emission Limits)

The two (2) cupolas, each equipped with a venturi scrubber system, consisting of two (2) afterburners, one (1) quencher tank, one (1) venturi scrubber and demister with a capacity of 12.8 tons of metal per



hour, each are exempt from this rule since they were both constructed and began operations in 1960, prior to the March 21, 1972 applicability date.

326 IAC 11-1-2 (Existing foundries: particulate matter emission limitations)

The PM emissions from the two (2) cupolas are subject to the specific limitations specified in 326 IAC 6-1-14 which are more stringent than those specified in this rule. This rule does not apply to all other foundry facilities.

**State Rule Applicability - Insignificant Activities**

326 IAC 8-3-2 (Cold Cleaner Operations)

Pursuant to 326 IAC 8-3-2 (Cold Cleaner Operations) for cold cleaning operations construction after January 1, 1980, the owner or operator shall:

- (a) Equip the cleaner with a cover;
- (b) Equip the cleaner with a facility for draining cleaned parts;
- (c) Close the degreaser cover whenever parts are not being handled in the cleaner;
- (d) Drain cleaned parts for at least fifteen (15) seconds or until dripping ceases;
- (e) Provide a permanent, conspicuous label summarizing the operation requirements;
- (f) Store waste solvent only in covered containers and not dispose of waste solvent or transfer it to another party, in such a manner that greater than twenty percent (20%) of the waste solvent (by weight) can evaporate into the atmosphere.

326 IAC 8-3-5(a) and (b) (Cold Cleaner Degreaser Operation and Control)

- (a) Pursuant to 326 IAC 8-3-5(a) (Cold Cleaner Degreaser Operation and Control), the owner or operator of a cold cleaner degreaser facility construction of which commenced after July 1, 1990 shall ensure that the following control equipment requirements are met:
  - (1) Equip the degreaser with a cover. The cover must be designed so that it can be easily operated with one (1) hand if:
    - (A) The solvent volatility is greater than two (2) kiloPascals (fifteen (15) millimeters of mercury or three-tenths (0.3) pounds per square inch) measured at thirty-eight degrees Celsius (38EC) (one hundred degrees Fahrenheit (100EF));
    - (B) The solvent is agitated; or
    - (C) The solvent is heated.
  - (2) Equip the degreaser with a facility for draining cleaned articles. If the solvent volatility is greater than four and three-tenths (4.3) kiloPascals (thirty-two (32) millimeters of mercury or six-tenths (0.6) pounds per square inch) measured at thirty-eight degrees Celsius (38EC) (one hundred degrees Fahrenheit (100EF)), then the drainage facility must be internal such that articles are enclosed under the cover while draining. The drainage facility may be external for applications where an internal type cannot fit into

the cleaning system.

- (3) Provide a permanent, conspicuous label which lists the operating requirements outlined in subsection (b).
- (4) The solvent spray, if used, must be a solid, fluid stream and shall be applied at a pressure which does not cause excessive splashing.
- (5) Equip the degreaser with one (1) of the following control devices if the solvent volatility is greater than four and three-tenths (4.3) kiloPascals (thirty-two (32) millimeters of mercury or six-tenths (0.6) pounds per square inch) measured at thirty-eight degrees Celsius (38EC) (one hundred degrees Fahrenheit (100EF)), or if the solvent is heated to a temperature greater than forty-eight and nine-tenths degrees Celsius (48.9EC) (one hundred twenty degrees Fahrenheit (120EF)):
  - (A) A freeboard that attains a freeboard ratio of seventy-five hundredths (0.75) or greater.
  - (B) A water cover when solvent used is insoluble in, and heavier than, water.
  - (C) Other systems of demonstrated equivalent control such as a refrigerated chiller or carbon adsorption. Such systems shall be submitted to the U.S. EPA as a SIP revision.
- (b) Pursuant to 326 IAC 8-3-5(b) (Cold Cleaner Degreaser Operation and Control), the owner or operator of a cold cleaning facility construction of which commenced after July 1, 1990 shall ensure that the following operating requirements are met:
  - (1) Close the cover whenever articles are not being handled in the degreaser.
  - (2) Drain cleaned articles for at least fifteen (15) seconds or until dripping ceases.
  - (3) Store waste solvent only in covered containers and prohibit the disposal or transfer of waste solvent in any manner in which greater than twenty percent (20%) of the waste solvent by weight could evaporate.

#### 326 IAC 6-1 (Nonattainment Area Limitations)

Pursuant to 326 IAC 6-1 (Nonattainment Area Limitations), the allowable PM emission rate from the trimming, grinding and machining operations shall not exceed a grain loading of 0.03 grains per dry standard cubic foot of exhaust air.

#### Testing Requirements

- (a) PM testing of the exhaust from Stack 010 serving the two (2) cupolas is required to show compliance with the 0.133 grain loading limit pursuant to 326 IAC 6-1-14.
- (b) PM and PM<sub>10</sub> testing of the exhausts from Stacks 100a, b and c serving the four (4) shot blasters (cleaning mills #1, #3, #5 and #7) are required to show compliance with the 0.03 grain loading and the pound per hour emissions rates to render the requirements of 326 IAC 2-2 not applicable.

- (c) PM testing of the stack 050 serving the one (1) tundish ladle for Group 3 spinner machines and two (2) back-up tundish ladles for magnesium inoculation, known as Unit ID 050, is required to show compliance with the 0.03 grain loading pursuant to 326 IAC 6-1-2(a).

### **Compliance Requirements**

Permits issued under 326 IAC 2-7 are required to ensure that sources can demonstrate compliance with applicable state and federal rules on a more or less continuous basis. All state and federal rules contain compliance provisions, however, these provisions do not always fulfill the requirement for a more or less continuous demonstration. When this occurs IDEM, OAQ, in conjunction with the source, must develop specific conditions to satisfy 326 IAC 2-7-5. As a result, compliance requirements are divided into two sections: Compliance Determination Requirements and Compliance Monitoring Requirements.

Compliance Determination Requirements in Section D of the permit are those conditions that are found more or less directly within state and federal rules and the violation of which serves as grounds for enforcement action. If these conditions are not sufficient to demonstrate continuous compliance, they will be supplemented with Compliance Monitoring Requirements, also Section D of the permit. Unlike Compliance Determination Requirements, failure to meet Compliance Monitoring conditions would serve as a trigger for corrective actions and not grounds for enforcement action. However, a violation in relation to a compliance monitoring condition will arise through a source's failure to take the appropriate corrective actions within a specific time period.

The compliance monitoring requirements applicable to this source are as follows:

- (a) The cupolas (Unit ID 010) have applicable compliance monitoring conditions as specified below:
  - (1) Visible emissions notations of the cupolas exhaust (Stack 010) shall be performed once per shift during normal daylight operations when exhausting to the atmosphere.
  - (2) Visible observations of the charge doors for smoke emissions shall be performed once per shift.
  - (3) Turbidity observations of the scrubber water shall be performed once per work day.
  - (4) A trained employee shall record whether emissions are normal or abnormal. For processes operated continuously "normal" means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not counting startup or shut down time. In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions. A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process. The Compliance Response Plan for this unit shall contain troubleshooting contingency and response steps for when an abnormal emission is observed.
  - (5) A continuous monitoring system shall be calibrated, maintained, and operated on the two (2) afterburners for measuring operating temperature. The output of this system shall be recorded, and that temperature shall be greater than or equal to the normal temperature used to demonstrate compliance during the most recent compliance stack test, or the Permittee shall take reasonable response steps in accordance with

Section C - Compliance Response Plan - Failure to Take Response Steps. A temperature reading that is outside the normal range is not a deviation from this permit. Failure to take response steps in accordance with Section C - Compliance Response Plan - Failure to Take Response Steps, shall be considered a violation of this permit.

The instrument used for determining the temperature shall comply with Section C - Pressure Gauge Specifications and Other Instruments, of this permit, shall be subject to approval by IDEM, OAQ, and shall be calibrated at least once every six (6) months.

- (6) The fan speed and/or motor amperage shall be observed at least once per work day when the two (2) afterburners are in operation. When for any one (1) reading, the fan speed and/or motor amperage are outside the normal range or the range of fan speeds and/or motor amperages established during the latest stack test, the Permittee shall take reasonable response steps in accordance with Section C- Compliance Response Plan- Failure to Take Response Steps. A fan speed and/or motor amperage reading that is outside the normal range is not a deviation from this permit. Failure to take response steps in accordance with Section C - Compliance Response Plan - Failure to Take Response Steps, shall be considered a violation of this permit.

The instrument used for determining the fan speed and motor amperage shall comply with Section C - Pressure Gauge Specifications and Other Instruments, of this permit, shall be subject to approval by IDEM, OAQ, and shall be calibrated at least once every six (6) months.

- (7) The Permittee shall record the total static pressure drop across the venturi scrubber used in conjunction with the two (2) alternating cupolas, known as Unit ID 010, (only one (1) operates at a time) at least once per shift when either of the cupolas is in operation when venting to the atmosphere. When for any one (1) reading, the pressure drop across the scrubber is below a minimum of 20.0 inches of water or a minimum established during the latest stack test, the Permittee shall take reasonable response steps in accordance with Section C - Compliance Response Plan - Failure to Take Response Steps. A pressure reading that is less than the above mentioned minimum is not a deviation from this permit. Failure to take response steps in accordance with Section C - Compliance Response Plan - Failure to Take Response Steps, shall be considered a violation of this permit.

The instrument used for determining the pressure shall comply with Section C - Pressure Gauge Specifications and Other Instruments, of this permit, shall be subject to approval by IDEM, OAQ, and shall be calibrated at least once every six (6) months.

- (8) The Permittee shall record the pH of the scrubbing liquor used in conjunction with the two (2) alternating cupolas, known as Unit ID 010, (only one (1) operates at a time) at least once per shift when the cupola is in operation when venting to the atmosphere. When for any one (1) reading, the pH is outside the normal range of 6.5 and 9.0 or the range of pH established during the latest stack test, the Permittee shall take reasonable response steps in accordance with Section C- Compliance Response Plan- Failure to Take Response Steps. A pH reading that is outside the above mentioned range is not a deviation from this permit. Failure to take response steps in accordance with Section C - Compliance Response Plan - Failure to Take Response Steps, shall be considered a violation of this permit.

The instrument used for determining the pH shall comply with Section C - Pressure Gauge Specifications and Other Instruments, of this permit, shall be subject to approval by IDEM, OAQ, and shall be calibrated at least once every six (6) months.

- (9) The Permittee shall continuously record the scrubbing liquor (water) flow rate across the venturi scrubber controlling the cupola when the cupola is in operation. When for any one (1) reading, the flow rate for the scrubbing liquor is outside the normal range of 75.0 to 200.0 gallons of water per minute or a range and a flow rate established during the latest stack test, the Permittee shall take reasonable response steps in accordance with Section C - Compliance Response Plan - Failure to Take Response Steps. A flow rate reading that is outside the normal range is not a deviation from this permit. Failure to take response steps in accordance with Section C - Compliance Response Plan - Failure to Take Response Steps, shall be considered a violation of this permit.

The instrument used for determining the flow rate shall comply with Section C - Pressure Gauge Specifications and Other Instruments, of this permit, shall be subject to approval by IDEM, OAQ, and shall be calibrated at least once every six (6) months.

- (10) An inspection shall be performed each calendar quarter of the scrubber and demister. Defective scrubber and/or demister part(s) shall be replaced. A record shall be kept of the results of the inspection.
- (11) In the event that a scrubber and/or demister failure has been observed:

Failed units and the associated process will be shut down immediately until the failed units have been repaired or replaced. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions).

These monitoring conditions are necessary because the cupolas and their controls devices must operate properly to ensure compliance with 326 IAC 6-1-14 and 326 IAC 2-7 (Part 70).

- (b) The four (4) electric induction furnaces (Unit ID 020 and Unit ID 021) have applicable compliance monitoring conditions as specified below:

In lieu of performing visible emissions notations of the four (4) electric induction furnaces exhaust, the Permittee may operate a baghouse to control emissions from the four (4) electric induction furnaces. Visible emission notations of the four (4) electric induction furnaces exhaust (Stack 013) shall be performed once per shift during normal daylight operations when exhausting to the atmosphere if the baghouse, known as DC#13 is *not* operating. A trained employee will record whether emissions are normal or abnormal. For processes operated continuously "normal" means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not counting startup or shut down time. In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions. A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process. The Compliance Response Plan for this unit shall contain troubleshooting contingency and response steps for when an abnormal

emission is observed.

These monitoring conditions are necessary because the electric induction furnaces and their controls devices must operate properly to ensure compliance with 326 IAC 6-1, 326 IAC 2-2 and 326 IAC 2-7 (Part 70).

- (c) The centrifugal casting operations (Unit ID 090) have applicable compliance monitoring conditions as specified below:
- (1) Visible emissions notations of the centrifugal casting operations exhausts (Stacks 090a through 090h) shall be performed once per shift during normal daylight operations when exhausting to the atmosphere. A trained employee will record whether emissions are normal or abnormal. For processes operated continuously "normal" means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not counting startup or shut down time. In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions. A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process. The Compliance Response Plan for this unit shall contain troubleshooting contingency and response steps for when an abnormal emission is observed.
  - (2) The Permittee shall record the total static pressure drop across each of the eight (8) baghouses, known as DC#1, DC#2A, DC#3, DC#4, DC#7 & DC#8, DC#5 and DC#6, controlling the centrifugal casting operations at least once per shift when casting is in operation. When for any one (1) reading, the pressure drop across each of the baghouses is outside the normal range of 2 to 8 inches of water or a range established during the latest stack test, the Permittee shall take reasonable response steps in accordance with Section C - Compliance Response Plan - Failure to Take Response Steps. A pressure reading that is outside the above mentioned range is not a deviation from this permit. Failure to take response steps in accordance with Section C - Compliance Response Plan - Failure to Take Response Steps, shall be considered a violation of this permit.
  - (3) An inspection shall be performed each calendar quarter of all bags controlling the centrifugal casting operation at this source when venting to the atmosphere. A baghouse inspection shall be performed within three (3) months of redirecting vents to the atmosphere and every three (3) months thereafter. Inspections are optional when venting to the indoors. All defective bags shall be replaced.

These monitoring conditions are necessary because the centrifugal casting operations and their controls devices must operate properly to ensure compliance with 326 IAC 6-1 and 326 IAC 2-7 (Part 70).

- (d) The shot blasting/cleaning mills (Unit ID 100) and their control devices have applicable compliance monitoring conditions as specified below:
- (1) The Permittee shall record the total static pressure drop across each of the three (3) baghouses, known as DC#2, DC#10 and DC#9 controlling the cleaning operations at least once per shift when any shot blaster is in operation. When for any one (1)

reading, the pressure drop across each of the baghouses is outside the normal range of 2 to 8 inches of water for DC#2, DC#10 and DC#9 or a range established during the latest stack test, the Permittee shall take reasonable response steps in accordance with Section C - Compliance Response Plan - Failure to Take Response Steps. A pressure reading that is outside the above mentioned range is not a deviation from this permit. Failure to take response steps in accordance with Section C - Compliance Response Plan - Failure to Take Response Steps, shall be considered a violation of this permit.

- (2) The Permittee shall install and operate a continuous bag leak detection system for shot blaster stack exhausts (Stacks 100a through 100c). The bag leak detection system shall meet the following requirements:
  - (A) The bag leak detection system shall be operated in a manner consistent with the manufacturer's written specifications and recommendations for operation and adjustment of the system.
  - (B) In no event shall the sensitivity be increased by more than 100% or decreased by more than 50% over a 365-day period unless such adjustment follows a complete baghouse inspection which demonstrates that the baghouse is in good operating condition.
  - (C) In the event that the bag leak detection system should malfunction, fail, or otherwise need repair, the Permittee shall perform visible emission notations of the shot blaster stack exhausts (Stacks 100a through 100c) once per shift during normal daylight operations when exhausting to the atmosphere until such time that the bag leak section system is repair and functioning properly. A trained employee shall record whether emissions are normal or abnormal. For processes operated continuously "normal" means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not counting startup or shut down time. In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions. A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process. The Compliance Response Plan for this unit shall contain troubleshooting contingency and response steps for when an abnormal emission is observed.
  - (D) The bag leak detection system shall be calibrated at least once per year.

These monitoring conditions are necessary because the shot blasting/cleaning mills (Unit ID 100) and their controls devices must operate properly to ensure compliance with 326 IAC 2-2, 326 IAC 6-1 and 326 IAC 2-7 (Part 70).

## Conclusion

The operation of this iron sleeve casting and machining source shall be subject to the conditions of the attached proposed **Part 70 Permit No. T 177-6887-00090**.



**Appendix A: Potential Emission Calculations**

**Company Name:** Richmond Liner Foundry and Machining Plant, Perfect Circle Division, Dana Corporation  
**Address City IN Zip:** 2153 and 2175 Williamburg Pike, Richmond, IN 47375

**Part 70:** T-177-6887

**Plt ID:** T-177-00090

**Reviewer:** Mark L. Kramer

**Date:** October 11, 1996

**Updated to Incorporate 11493 and 12987**

<b>Emission Unit</b>		<b>010 2 Cupolas</b>						
Pollutant	Maximum Rate (tons/hr)	Emission Factor (lbs/tons)	Uncontrolled Emission Rate (lbs/hr)	Uncontrolled Emission Rate (tons/yr)	Control Efficiency (%)	Controlled Emission Rate (lbs/hr)	Controlled Emission Rate (tons/yr)	Limited Emission Rate (tons/yr)
PM	12.8	84.6	1083.9	4747.5	97.9%	22.8	99.7	51.5
PM-10	12.8	84.6	1082.9	4743.0	97.9%	22.7	99.6	51.5
SO <sub>2</sub>	12.8	1.25	16.00	70.08	0.0%	16.0	70.1	70.1
NO <sub>x</sub>	12.8	0.10	1.28	5.6064	0.0%	1.280	5.606	5.61
VOC	12.8	0.18	2.304	10.1	0.0%	2.304	10.1	10.1
CO	12.8	145	1856	8129.3	90.0%	185.6	812.9	812.9
Lead	12.8	2.66	34.0	149.1	97.9%	0.715	3.132	3.13
Mn	12.8	1.83	23.4	102.6	97.9%	0.492	2.155	2.15
Cr	12.8	0.0383	0.49024	2.1472512	97.9%	0.010	0.045	0.045
Ni	12.8	0.0214	0.27392	1.1997696	97.9%	0.006	0.025	0.025

**Emission factors from stack tests and FIRES**

**Pursuant to 326 IAC 6-1-14, PM is limited to 51.5 tons per year and 0.133 gr/dscf**

Note that 20% of the PM emissions from EU 060 are vent through the cupola stack

<b>Emission Unit</b>		<b>020 3 Electric Induction Furnaces</b>						
Pollutant	Maximum Rate (tons/hr)	Emission Factor (lbs/tons)	Uncontrolled Emission Rate (lbs/hr)	Uncontrolled Emission Rate (tons/yr)	Control Efficiency (%)	Controlled Emission Rate (lbs/hr)	Controlled Emission Rate (tons/yr)	Limited Emission Rate (tons/yr)
PM	10.5	0.90	9.45	41.4	0.0%	9.450	41.4	
PM-10	10.5	0.86	9.03	39.6	0.0%	9.030	39.6	
SO <sub>2</sub>	10.5	0.00	0.00	0.00	0.0%	0.000	0.000	
NO <sub>x</sub>	10.5	0.00	0.00	0.00	0.0%	0.000	0.000	
VOC	10.5	0.00	0.00	0.00	0.0%	0.000	0.000	
CO	10.5	0.00	0.00	0.00	0.0%	0.000	0.000	
Lead	10.5	0.0283	0.29715	1.301517	0.0%	0.297	1.302	
Mn	10.5	0.0194	0.2037	0.892206	0.0%	0.204	0.892	
Cr	10.5	0.000408	0.004284	0.01876392	0.0%	0.004	0.019	
Ni	10.5	0.000228	0.002394	0.01048572	0.0%	0.002	0.010	

**Emission factors from stack tests and FIRES**

<b>Emission Unit</b>		<b>021 1 Electric Induction Furnace</b>						
Pollutant	Maximum Rate (tons/hr)	Emission Factor (lbs/tons)	Uncontrolled Emission Rate (lbs/hr)	Uncontrolled Emission Rate (tons/yr)	Control Efficiency (%)	Controlled Emission Rate (lbs/hr)	Controlled Emission Rate (tons/yr)	Limited Emission Rate (tons/yr)
PM	4.8	0.900	4.320	18.9	0.0%	4.320	18.9	14.1
PM-10	4.8	0.860	4.128	18.1	0.0%	4.128	18.1	13.5
SO <sub>2</sub>	4.8	0.000	0.000	0.000	0.0%	0.000	0.000	0.000
NO <sub>x</sub>	4.8	0.000	0.000	0.000	0.0%	0.000	0.000	0.000
VOC	4.8	0.000	0.000	0.000	0.0%	0.000	0.000	0.000
CO	4.8	0.000	0.000	0.000	0.0%	0.000	0.000	0.000
Lead	4.8	0.02830	0.136	0.595	0.0%	0.136	0.595	0.444
Mn	4.8	0.01940	0.093	0.408	0.0%	0.093	0.408	0.305
Cr	4.8	0.000408	0.002	0.009	0.0%	0.002	0.009	0.006
Ni	4.8	0.000228	0.001	0.005	0.0%	0.001	0.005	0.004

**Emission factors from stack tests and FIRES**

**Emission limit based on 2616 tons per month production limit pursuant to 326 IAC 2-2 and CP 177-6425**

Emission Unit 030 7 Electric Holding Furnaces							
Pollutant	Maximum Rate (tons/hr)	Emission Factor (lbs/tons)	Uncontrolled Emission Rate (lbs/hr)	Uncontrolled Emission Rate (tons/yr)	Control Efficiency (%)	Controlled Emission Rate (lbs/hr)	Controlled Emission Rate (tons/yr)
PM	23.3	0.056	1.3048	5.715024	0.0%	1.305	5.715
PM-10	23.3	0.056	1.3048	5.715024	0.0%	1.305	5.715
SO2	23.3	0	0.00	0	0.0%	0.000	0.000
NOx	23.3	0.00	0	0	0.0%	0.000	0.000
VOC	23.3	0	0	0	0.0%	0.000	0.000
CO	23.3	0	0	0	0.0%	0.000	0.000
Lead	23.3	2.630000000E-06	0.00006128	0.0002684	0.0%	0.000	0.000
Mn	23.3	0.000342	0.0079686	0.03490247	0.0%	0.008	0.035
Cr	23.3	0.000134	0.0031222	0.01367524	0.0%	0.003	0.014
Ni	23.3	0.0000896	0.00208768	0.00914404	0.0%	0.002	0.009

Emission factors from AP-42

Emission Unit 031 1 Electric Holding Furnace							
Pollutant	Maximum Rate (tons/hr)	Emission Factor (lbs/tons)	Uncontrolled Emission Rate (lbs/hr)	Uncontrolled Emission Rate (tons/yr)	Control Efficiency (%)	Controlled Emission Rate (lbs/hr)	Controlled Emission Rate (tons/yr)
PM	4.8	0.056	0.269	1.177	0.0%	0.269	1.177
PM-10	4.8	0.056	0.269	1.177	0.0%	0.269	1.177
SO2	4.8	0.000	0.000	0.000	0.0%	0.000	0.000
NOx	4.8	0.000	0.000	0.000	0.0%	0.000	0.000
VOC	4.8	0.000	0.000	0.000	0.0%	0.000	0.000
CO	4.8	0.000	0.000	0.000	0.0%	0.000	0.000
Lead	4.8	0.0000026	0.000	0.000	0.0%	0.000	0.000
Mn	4.8	0.0003420	0.002	0.007	0.0%	0.002	0.007
Cr	4.8	0.0001340	0.001	0.003	0.0%	0.001	0.003
Ni	4.8	0.0000896	0.000	0.002	0.0%	0.000	0.002

Emission factors from AP-42

Emission Unit 050 1 Tundish Ladle							
Pollutant	Maximum Rate (tons/hr)	Emission Factor (lbs/tons)	Uncontrolled Emission Rate (lbs/hr)	Uncontrolled Emission Rate (tons/yr)	Control Efficiency (%)	Controlled Emission Rate (lbs/hr)	Controlled Emission Rate (tons/yr)
PM	40	0.437	17.5	76.6	0.0%	17.5	76.6
PM-10	40	0.437	17.5	76.6	0.0%	17.5	76.6
SO2	40	0.000	0.000	0.000	0.0%	0.000	0.000
NOx	40	0.000	0.000	0.000	0.0%	0.000	0.000
VOC	40	0.005	0.200	0.876	0.0%	0.200	0.876
CO	40	0.000	0.000	0.000	0.0%	0.000	0.000
Lead	40	0.0000205	0.001	0.004	0.0%	0.001	0.004
Mn	40	0.0026700	0.107	0.468	0.0%	0.107	0.468
Cr	40	0.0010500	0.042	0.184	0.0%	0.042	0.184
Ni	40	0.0006990	0.028	0.122	0.0%	0.028	0.122

Emission factors from stack tests and FIRES

**Emission Unit 060**

**Cupola Charge Handling**

Pollutant	Maximum Rate (tons/hr)	Emission Factor (lbs/tons)	Uncontrolled Emission Rate (lbs/hr)	Uncontrolled Emission Rate (tons/yr)	Control Efficiency (%)	Controlled Emission Rate (lbs/hr)	Controlled Emission Rate (tons/yr)
PM	12.8	0.40	3.072	13.5	0.0%	3.072	13.5
PM-10	12.8	0.36	4.608	20.2	0.0%	4.608	20.2
SO2	12.8	0.00	0.00	0.00	0.0%	0.000	0.000
NOx	12.8	0.00	0.00	0.00	0.0%	0.000	0.000
VOC	12.8	0.00	0.00	0.00	0.0%	0.000	0.000
CO	12.8	0.00	0.00	0.00	0.0%	0.000	0.000
Lead	12.8	0.00	0.00	0.00	0.0%	0.000	0.000
Mn	12.8	0.00	0.00	0.00	0.0%	0.000	0.000
Cr	12.8	0.00	0.00	0.00	0.0%	0.000	0.000
Ni	12.8	0.00	0.00	0.00	0.0%	0.000	0.000

Note that the PM emissions directly to the stack are 60% of the total with 20% vented to the cupola 20% fugitive.  
Emission factors from FIRES - PM adjusted to reflect the fact that 0.2 lbs/ton is for scrap preheating which is not applicable to EU 060.

**Emission Unit 070**

**Electric Furnace Charge Handling**

Pollutant	Maximum Rate (tons/hr)	Emission Factor (lbs/tons)	Uncontrolled Emission Rate (lbs/hr)	Uncontrolled Emission Rate (tons/yr)	Control Efficiency (%)	Controlled Emission Rate (lbs/hr)	Controlled Emission Rate (tons/yr)
PM	10.0	0.400	3.000	13.1	0.0%	3.000	13.1
PM-10	10.0	0.360	3.600	15.8	0.0%	3.600	15.8
SO2	10.0	0.000	0.000	0.000	0.0%	0.000	0.000
NOx	10.0	0.000	0.000	0.000	0.0%	0.000	0.000
VOC	10.0	0.000	0.000	0.000	0.0%	0.000	0.000
CO	10.0	0.000	0.000	0.000	0.0%	0.000	0.000
Lead	10.0	0.0000000	0.000	0.000	0.0%	0.000	0.000
Mn	10.0	0.0000000	0.000	0.000	0.0%	0.000	0.000
Cr	10.0	0.0000000	0.000	0.000	0.0%	0.000	0.000
Ni	10.0	0.0000000	0.000	0.000	0.0%	0.000	0.000

Note that the PM emissions directly to the stack are 75% of the total with 25% fugitive.  
Emission factors from FIRES - PM adjusted to reflect the fact that 0.2 lbs/ton is for scrap preheating which is not applicable to EU 060.

**Emission Unit 080**

**Scrap Charge Preheater**

Pollutant	Maximum Rate (tons/hr)	Emission Factor (lbs/tons)	Uncontrolled Emission Rate (lbs/hr)	Uncontrolled Emission Rate (tons/yr)	Control Efficiency (%)	Controlled Emission Rate (lbs/hr)	Controlled Emission Rate (tons/yr)
PM	10.0	0.200	2.000	8.760	0.0%	2.000	8.760
PM-10	10.0	0.200	2.000	8.760	0.0%	2.000	8.760
SO2	10.0	0.000	0.000	0.000	0.0%	0.000	0.000
NOx	10.0	0.000	0.000	0.000	0.0%	0.000	0.000
VOC	10.0	0.000	0.000	0.000	0.0%	0.000	0.000
CO	10.0	0.000	0.000	0.000	0.0%	0.000	0.000
Lead	10.0	0.0101000	0.101	0.442	0.0%	0.101	0.442
Mn	10.0	0.0000000	0.000	0.000	0.0%	0.000	0.000
Cr	10.0	0.0000000	0.000	0.000	0.0%	0.000	0.000
Ni	10.0	0.0000000	0.000	0.000	0.0%	0.000	0.000

Emission factors from AP-42 and best engineering judgement

Emission Unit		090 12 Centrifugal Casting Machines Including Spinner #18, #41, #43, #45, and #47 permitted by 177-12987					
Pollutant	Maximum Rate (tons/hr)	Emission Factor (lbs/tons)	Uncontrolled Emission Rate (lbs/hr)	Uncontrolled Emission Rate (tons/yr)	Control Efficiency (%)	Controlled Emission Rate (lbs/hr)	Controlled Emission Rate (tons/yr)
PM	46.14	0.338	15.59532	68.3	89.1%	1.700	7.446
PM-10	46.14	0.338	15.59532	68.3	89.1%	1.700	7.446
SO2	46.14	0.00	0.00	0.00	0.0%	0.000	0.000
NOx	46.14	0.00	0.00	0.00	0.0%	0.000	0.000
VOC	46.14	0.00	0.00	0.00	0.0%	0.000	0.000
CO	46.14	0.00	0.00	0.00	0.0%	0.000	0.000
Lead	46.14	0.000016	0.00	0.003	89.1%	0.000	0.000
Mn	46.14	0.002060	0.095	0.416	89.1%	0.010	0.045
Cr	46.14	0.000811	0.037	0.164	89.1%	0.004	0.018
Ni	46.14	0.000541	0.025	0.109	89.1%	0.003	0.012

Dust collector estimates

Emission Unit		100 3 Shot Blasters					
Pollutant	Maximum Rate (tons/hr)	Emission Factor (lbs/tons)	Uncontrolled Emission Rate (lbs/hr)	Uncontrolled Emission Rate (tons/yr)	Control Efficiency (%)	Controlled Emission Rate (lbs/hr)	Controlled Emission Rate (tons/yr)
PM	30.0	15.500	465.000	2036.7	98.0%	9.25	40.5
PM-10	30.0	1.700	51.000	223.4	98.0%	1.015	4.445
SO2	30.0	0.000	0.000	0.000	0.0%	0.000	0.000
NOx	30.0	0.000	0.000	0.000	0.0%	0.000	0.000
VOC	30.0	0.000	0.000	0.000	0.0%	0.000	0.000
CO	30.0	0.000	0.000	0.000	0.0%	0.000	0.000
Lead	30.0	0.0007990	0.024	0.105	98.0%	0.000	0.002
Mn	30.0	0.1040000	3.120	13.666	98.0%	0.062	0.272
Cr	30.0	0.0408000	1.224	5.361	98.0%	0.024	0.107
Ni	30.0	0.0272000	0.816	3.574	98.0%	0.016	0.071

Emission factors from Fires for PM-10 and from Gutow for PM since its only shot blasting (not grinding and cleaning)

Emission Unit		100 One (1) Rotoblast Cabinet (Cleaning Mill #7) Permitted by 177-12987					
Pollutant	Maximum Rate (tons/hr)	Emission Factor (lbs/tons)	Uncontrolled Emission Rate (lbs/hr)	Uncontrolled Emission Rate (tons/yr)	Control Efficiency (%)	Controlled Emission Rate (lbs/hr)	Controlled Emission Rate (tons/yr)
PM	13.0	15.500	201.500	882.6	98.1%	3.83	16.8
PM-10	13.0	1.700	22.100	96.8	98.1%	0.420	1.839
SO2	13.0	0.000	0.000	0.000	0.0%	0.000	0.000
NOx	13.0	0.000	0.000	0.000	0.0%	0.000	0.000
VOC	13.0	0.000	0.000	0.000	0.0%	0.000	0.000
CO	13.0	0.000	0.000	0.000	0.0%	0.000	0.000
Lead	13.0	0.0007990	0.010	0.045	98.1%	0.000	0.001
Mn	13.0	0.1040000	1.352	5.922	98.1%	0.026	0.113
Cr	13.0	0.0408000	0.530	2.323	98.1%	0.010	0.044
Ni	13.0	0.0272000	0.354	1.549	98.1%	0.007	0.029

Emission factors from Fires for PM-10 and from Gutow for PM since its only shot blasting (not grinding and cleaning)

Emission Unit		Insignificant Activity Wet Liner Machining Lathing Operation					
Pollutant	Maximum Rate (tons/hr)	Emission Factor (lbs/tons)	Uncontrolled Emission Rate (lbs/hr)	Uncontrolled Emission Rate (tons/yr)	Control Efficiency (%)	Controlled Emission Rate (lbs/hr)	Controlled Emission Rate (tons/yr)
PM	0.5	8.900	4.450	19.5	90.0%	0.445	1.951
PM-10	0.5	8.900	4.450	19.5	90.0%	0.445	1.951
SO2	0.5	0.000	0.000	0.000	0.0%	0.000	0.000
NOx	0.5	0.000	0.000	0.000	0.0%	0.000	0.000
VOC	0.5	0.000	0.000	0.000	0.0%	0.000	0.000
CO	0.5	0.000	0.000	0.000	0.0%	0.000	0.000
Lead	0.5	0.0004200	0.000	0.001	90.0%	0.000	0.000
Mn	0.5	0.0540000	0.027	0.118	90.0%	0.003	0.012
Cr	0.5	0.0210000	0.011	0.046	90.0%	0.001	0.005
Ni	0.5	0.0142000	0.007	0.031	90.0%	0.001	0.003

Dust collector estimates

Emission Unit	Fugitive 060		Uncontrolled Emission Rate (lbs/hr)	Uncontrolled Emission Rate (tons/yr)	Control Efficiency (%)	Controlled Emission Rate (lbs/hr)	Controlled Emission Rate (tons/yr)
Pollutant	Maximum Rate (tons/hr)	Emission Factor (lbs/tons)					
PM	12.8	0.4	1.024	4.49	0.0%	1.024	4.485

Emission Unit	Fugitive 070						
PM	10	0.4	1.000	4.38	0.0%	1.000	4.380

**Emission Unit 040 Natural Gas Indirect Fired Burner Supplying Hot Blast Air to Cupola Updated Natural Gas Emission Factors**

Heat Input Capacity  
MMBtu/hr

Potential Throughput  
MMCF/yr

14.0

122.6

Emission Factor in lb/MMCF	Pollutant					
	PM	PM10	SO2	NOx	VOC	CO
	1.9	7.6	0.6	100.0	5.5	84.0
Potential Emission in tons/yr	0.117	0.466	0.037	6.132	0.337	5.151

**Methodology**

MMBtu = 1,000,000 Btu

MMCF = 1,000,000 Cubic Feet of Gas

Emission Factors for NOx: Uncontrolled = 100, Low NOx Burner = 50, Flue gas recirculation = 32

PM factor is for filter PM only, PM10 factor is filter and condensible combined

Potential Throughput (MMCF) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1 MMCF/1,000 MMBtu

Emission Factors are from AP 42, Chapter 1.4, Tables 1.4-1, 1.4-2, 1.4-3, SCC #1-02-006-02

Emission (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton

**Emission Unit 040 Propane Indirect Fired Burner Supplying Hot Blast Air to Cupola**

Heat Input Capacity  
MMBtu/hr

Potential Throughput  
kgals/year

S = Sulfur Content = 0.0093 percent

14.00

1340.33

Emission Factor in lb/kgal	Pollutant					
	PM*	PM10*	SO2	NOx	VOC	CO
	0.6	0.6	0.8 (86.5S)	19.0	0.25	3.2
Potential Emission in tons/yr	0.402	0.402	0.539	12.7	0.168	2.14
<b>Worst Case Propane or Natural Gas</b>	<b>0.402</b>	<b>0.466</b>	<b>0.539</b>	<b>12.733</b>	<b>0.337</b>	<b>5.151</b>

**Methodology**

1 gallon of LPG has a heating value of 94,000 Btu

1 gallon of propane has a heating value of 91,500 Btu (use this to convert emission factors to an energy basis for propane)

Source - FIRES 6.21 External Combustion Sources - Industrial Rating 10 to 100 MMBTU per hour

Potential Throughput (kgals/year) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1 kgal per 1000 gallon x 1 gal per 0.0915 MMBtu

PM and PM10 Emission Factors are for filterable PM.

Emission (tons/yr) = Throughput (kgals/yr) x Emission Factor (lb/kgal) / 2,000 lb/ton

**Emission 010 Natural Gas**  
**Unit Two Cupola Afterburners each rated 8.0 mmBtu/hr**

**Updated Natural Gas Emission Factors**

Heat Input Capacity  
MMBtu/hr

Potential Throughput  
MMCF/yr

16.0

140.2

Emission Factor in lb/MMCF	Pollutant					
	PM	PM10	SO2	NOx	VOC	CO
	1.9	7.6	0.6	100.0	5.5	84.0
Potential Emission in tons/yr	0.133	0.533	0.042	7.008	0.385	5.887

**Methodology**

MMBtu = 1,000,000 Btu

MMCF = 1,000,000 Cubic Feet of Gas

Emission Factors for NOx: Uncontrolled = 100, Low NOx Burner = 50, Flue gas recirculation = 32

PM factor is for filter PM only, PM10 factor is filter and condensible combined

Potential Throughput (MMCF) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1 MMCF/1,000 MMBtu

Emission Factors are from AP 42, Chapter 1.4, Tables 1.4-1, 1.4-2, 1.4-3, SCC #1-02-006-02

Emission (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton

**Emission 010 Propane**  
**Unit Two Cupola Afterburners each rated 8.0 mmBtu/hr**

Heat Input Capacity  
MMBtu/hr

Potential Throughput  
kgals/year

S = Sulfur Content = 0.0093 percent

16.00

1531.80

Emission Factor in lb/kgal	Pollutant					
	PM*	PM10*	SO2	NOx	VOC	CO
	0.6	0.6	0.8 (86.5S)	19.0	0.25	3.2
Potential Emission in tons/yr	0.460	0.460	0.616	14.6	0.191	2.45
<b>Worst Case Propane or Natural Gas</b>	<b>0.460</b>	<b>0.533</b>	<b>0.616</b>	<b>14.552</b>	<b>0.385</b>	<b>5.887</b>

**Methodology**

1 gallon of LPG has a heating value of 94,000 Btu

1 gallon of propane has a heating value of 91,500 Btu (use this to convert emission factors to an energy basis for propane)

Source - FIRES 6.21 External Combustion Sources - Industrial Rating 10 to 100 MMBTU per hour

Potential Throughput (kgals/year) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1 kgal per 1000 gallon x 1 gal per 0.0915 MMBtu

PM and PM10 Emission Factors are for filterable PM.

Emission (tons/yr) = Throughput (kgals/yr) x Emission Factor (lb/kgal) / 2,000 lb/ton

Emission Unit	Natural Gas	Insignificant Activities (see list at right)	Heat Input Capacity MMBtu/hr	Potential Throughput MMCF/yr	mmBtu/hr		mmBtu/hr	
					Group 1 Die Heater	2.00	Group 8 Spinner	2.10
					Group 2 Die Heater	2.00	Furnace #3 Preheater	1.00
					Group 1 Spinner	2.10	Furnace #4 Preheater	1.00
					Group 2 Spinner	2.10	Furnace #6 Preheater	1.00
					Group 3 Spinner	2.10	Furnace #8 Preheater	1.00
					Group 4 Spinner	2.10	Heat Treat Furnace 1	3.75
					Group 5 Spinner	2.10	Heat Treat Furnace 2	3.75
					Group 6 Spinner	2.10	Seven Air Makeup Units	35.00
							<b>Total</b>	<b>65.2</b>

Emission Factor in lb/MMCF	Pollutant					
	PM	PM10	SO2	NOx	VOC	CO
	1.9	7.6	0.6	100.0	5.5	84.0
Potential Emission in tons/yr	0.543	2.170	0.171	28.558	1.571	23.988

**Methodology**

MMBtu = 1,000,000 Btu

MMCF = 1,000,000 Cubic Feet of Gas

Emission Factors for NOx: Uncontrolled = 100, Low NOx Burner = 50, Flue gas recirculation = 32

PM factor is for filter PM only, PM10 factor is filter and condensible combined

Potential Throughput (MMCF) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1 MMCF/1,000 MMBtu

Emission Factors are from AP 42, Chapter 1.4, Tables 1.4-1, 1.4-2, 1.4-3, SCC #1-02-006-02

Emission (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton

### All Natural Gas Combustion, Including EU 010, 040, and Insignificant Activities

Heat Input Capacity  
MMBtu/hr

Potential Throughput  
MMCF/yr

95.200

833.95

#### HAPs - Organics

Emission Factor in lb/MMcf	Benzene 2.1E-03	Dichlorobenzene 1.2E-03	Formaldehyde 7.5E-02	Hexane 1.8E+00	Toluene 3.4E-03
Potential Emission in tons/yr	8.756E-04	5.004E-04	3.127E-02	7.506E-01	1.418E-03

#### HAPs - Metals

Emission Factor in lb/MMcf	Lead 5.0E-04	Cadmium 1.1E-03	Chromium 1.4E-03	Manganese 3.8E-04	Nickel 2.1E-03	Total HAPs
Potential Emission in tons/yr	2.085E-04	4.587E-04	5.838E-04	1.585E-04	8.756E-04	0.787

Methodology is the same as page 8

The five highest organic and metal HAPs emission factors are provided above.

Additional HAPs emission factors are available in AP-42, Chapter 1.4.

### Insignificant Activities

#### Dry Lathe Machining Operation

Dust collected in baghouse in 1 year is 4,000 pounds (2 tons) with a minimum collection efficiency of 99.9%

Therefore, PM = PM10 =  $4000 \times (1 - 0.999) / 2000$  lb/ton =

**0.002** tons/yr

#### Coke and Stone Conveyor

Source	AP-42 Emission Factor lbs/ton	Actual Throughput tons/day	PM = PM10 tons/year
Coke and Stone Conveyor based on 16 hours per day 140 charges per day consisting of 225 lbs of coke and 200 lbs of stone	0.000048	29.75	<b>0.0003</b>

Summary of Emissions

Significant Emission Units	Uncontrolled Potential Emissions									
	PM (tons/yr)	PM-10 (tons/yr)	SO2 (tons/yr)	NOx (tons/yr)	VOC (tons/yr)	CO (tons/yr)	Lead (tons/yr)	Mn (tons/yr)	Cr (tons/yr)	Ni (tons/yr)
010	4747.5	4743.0	70.1	5.61	10.1	8129.3	149.1	102.6	2.15	1.20
020	41.4	39.6	0.000	0.000	0.000	0.000	1.30	0.892	0.019	0.010
021	18.9	18.1	0.000	0.000	0.000	0.000	0.595	0.408	0.009	0.005
030	5.72	5.72	0.000	0.000	0.000	0.000	0.000	0.035	0.014	0.009
031	1.18	1.18	0.000	0.000	0.000	0.000	0.000	0.007	0.003	0.002
050	76.6	76.6	0.000	0.000	0.876	0.000	0.004	0.468	0.184	0.122
060	13.5	20.2	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
070	13.1	15.8	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
080	8.76	8.76	0.000	0.000	0.000	0.000	0.000	0.442	0.000	0.000
090	68.3	68.3	0.000	0.000	0.000	0.000	0.003	0.416	0.164	0.109
100	2036.7	223.4	0.000	0.000	0.000	0.000	0.105	13.7	5.36	3.57
100	882.6	96.8	0.000	0.000	0.000	0.000	0.045	5.9	2.32	1.55
Insig Wet Liner	19.5	19.5	0.000	0.000	0.000	0.000	0.001	0.118	0.046	0.031
040	0.402	0.466	0.539	12.733	0.337	5.151	0.000	0.000	0.000	0.000
060	4.49	4.49								
070	4.38	4.38								
010	0.460	0.533	0.616	14.552	0.385	5.887	0.000	0.000	0.000	0.000
Insig Gas	0.543	2.170	0.171	28.558	1.571	23.988				
Insig Dry Lathe	0.002	0.002								
Insig Conveyor	0.0003	0.0003								
<b>Total</b>	<b>7944.0</b>	<b>5348.8</b>	<b>71.4</b>	<b>61.4</b>	<b>13.3</b>	<b>8164.3</b>	<b>151.2</b>	<b>125.0</b>	<b>10.3</b>	<b>6.6</b>
Significant Emission Units	Controlled Potential Emissions									
	PM (tons/yr)	PM-10 (tons/yr)	SO2 (tons/yr)	NOx (tons/yr)	VOC (tons/yr)	CO (tons/yr)	Lead (tons/yr)	Mn (tons/yr)	Cr (tons/yr)	Ni (tons/yr)
010	99.7	99.6	70.1	5.61	10.1	812.9	3.13	2.15	0.045	0.025
020	41.4	39.6	0.000	0.000	0.000	0.000	1.302	0.892	0.019	0.010
021	18.9	18.1	0.000	0.000	0.000	0.000	0.595	0.408	0.009	0.005
030	5.72	5.72	0.000	0.000	0.000	0.000	0.000	0.035	0.014	0.009
031	1.18	1.18	0.000	0.000	0.000	0.000	0.000	0.007	0.003	0.002
050	76.6	76.6	0.000	0.000	0.876	0.000	0.004	0.468	0.184	0.122
060	13.5	20.2	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
070	13.1	15.8	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
080	8.76	8.76	0.000	0.000	0.000	0.000	0.442	0.000	0.000	0.000
090	7.45	7.45	0.000	0.000	0.000	0.000	0.000	0.045	0.018	0.012
100	40.5	4.45	0.000	0.000	0.000	0.000	0.002	0.272	0.107	0.071
100	16.8	1.84	0.000	0.000	0.000	0.000	0.001	0.113	0.044	0.029
Insig Wet Liner	1.95	1.95	0.000	0.000	0.000	0.000	0.000	0.012	0.005	0.003
040	0.402	0.466	0.539	12.733	0.337	5.151	0.000	0.000	0.000	0.000
060	4.49									
070	4.38									
010	0.460	0.533	0.616	14.552	0.385	5.887	0.000	0.000	0.000	0.000
Insig Gas	0.543	2.170	0.171	28.558	1.571	23.988				
Insig Dry Lathe	0.002	0.002								
Insig Conveyor	0.000	0.000								
<b>Total</b>	<b>355.8</b>	<b>304.3</b>	<b>71.4</b>	<b>61.4</b>	<b>13.3</b>	<b>848.0</b>	<b>5.48</b>	<b>4.41</b>	<b>0.446</b>	<b>0.290</b>



**Appendix B: Emission Calculations  
Baghouse Operations**

Page 9 of 9 TSD App B

**Company Name: Richmond Liner Foundry and Machining Plant,, Perfect Circle Division, Dana Corporation**  
**Address City IN Zip: 2153 and 2175 Williamburg Pike, Richmond, IN 47375**  
**Part 70: : T-177-6887**  
**Plt ID: T-177-00090**  
**Reviewer: Mark L. Kramer**  
**Date: October 11, 1996**  
**Revised: For Addendum to the TSD**

EU	Stack/Vent DC #	Allowable Grain Loading per Dry Std. Cubic foot of Outlet Air (g/dscf)	Gas or Air Flow Rate (acfm.)	Temperature (F)	Gas or Air Flow Rate (dcfm.)	Allowable Emission Rate (lbs/hr)	Allowable Emission Rate (tons/yr)	Actual
								Emission Rate after Controls (lbs/hr)
010	010	0.133	32000.0	165.0	26601.1	30.325	132.82	22.8
020	020a	0.070	20000.0	80.0	19242.7	11.546	50.57	6.89
020	020b	0.070	20000.0	80.0	19242.7	11.546	50.57	6.89
021	020a/b	0.070	20000.0	80.0	19242.7	11.546	50.57	6.89
030	030	0.030	114000.0	2600.0	19355.9	4.977	21.80	1.31
031	031	0.030	23000.0	2600.0	3905.1	1.004	4.40	0.269
040	040	0.030	2500.0	700.0	1119.7	0.288	1.26	0.192
050	050a	0.030	3000.0	80.0	2886.4	0.742	3.25	0.117
050	050b	0.030	42000.0	80.0	40409.6	10.391	45.51	1.633
060	060	0.030	20000.0	80.0	19242.7	4.948	21.67	3.072
070	070	0.030	20000.0	80.0	19242.7	4.948	21.67	3.000
080	080	0.030	20000.0	150.0	17034.5	4.380	19.19	2.000
090	090a DC#3	0.030	20000.0	100.0	18555.4	4.771	20.90	0.184
090	090b DC#4	0.030	3500.0	100.0	3247.2	0.835	3.66	0.184
090	090c DC#5	0.030	3100.0	100.0	2876.1	0.740	3.24	0.184
090	090d DC#6	0.030	3100.0	100.0	2876.1	0.740	3.24	0.184
090	090e DC#7	0.030	3500.0	100.0	3247.2	0.835	3.66	0.184
090	090f DC#8	0.030	3100.0	100.0	2876.1	0.740	3.24	0.184
090	090g DC#2A	0.030	3100.0	100.0	2876.1	0.740	3.24	0.184
090	090h DC#1	0.030	3700.0	100.0	3432.8	0.883	3.87	0.184
100	100a DC#9	0.030	16000.0	80.0	15394.1	3.958	17.34	3.700
100	100b DC#10	0.030	16000.0	80.0	15394.1	3.958	17.34	3.700
100	100c DC#2	0.030	8000.0	80.0	7697.1	1.979	8.67	1.850
Insig.	Baghouse	0.030	2000.0	80.0	1924.3	0.495	2.17	0.445

Limited to 51.5 TPY pursuant to 326 IAC 6-1-14  
Assumed Equal PM Emission From 2 Roof Fans w/EU-020 & EU-021  
Assumed Equal PM Emission From 2 Roof Fans  
Assumed Equal PM Emission From 2 Roof Fans

**Appendix B: Potential Emission Calculations**

**Company Name:** Richmond Liner Foundry and Machining Plant, Perfect Circle Division, Dana Corporation  
**Address City IN Zip:** 2153 and 2175 Williamburg Pike, Richmond, IN 47375

**Part 70:** T-177-6887

**Plt ID:** T-177-00090

**Reviewer:** Mark L. Kramer

**Date:** October 11, 1996

**Updated to Incorporate 11493 and 12987**

**Revised:** For Addendum to the TSD

<b>Emission Unit</b>		<b>010 2 Cupolas</b>						
Pollutant	Maximum Rate (tons/hr)	Emission Factor (lbs/tons)	Uncontrolled Emission Rate (lbs/hr)	Uncontrolled Emission Rate (tons/yr)	Control Efficiency (%)	Controlled Emission Rate (lbs/hr)	Controlled Emission Rate (tons/yr)	Limited Emission Rate (tons/yr)
PM	12.8	84.6	1083.9	4747.5	97.9%	22.8	99.7	51.5
PM-10	12.8	84.6	1082.9	4743.0	97.9%	22.7	99.6	51.5
SO <sub>2</sub>	12.8	1.25	16.00	70.08	0.0%	16.0	70.1	70.1
NO <sub>x</sub>	12.8	0.10	1.28	5.6064	0.0%	1.280	5.606	5.61
VOC	12.8	0.18	2.304	10.1	0.0%	2.304	10.1	10.1
CO	12.8	145	1856	8129.3	90.0%	185.6	812.9	812.9
Lead	12.8	2.66	34.0	149.1	97.9%	0.715	3.132	3.13
Mn	12.8	1.83	23.4	102.6	97.9%	0.492	2.155	2.15
Cr	12.8	0.0383	0.49024	2.1472512	97.9%	0.010	0.045	0.045
Ni	12.8	0.0214	0.27392	1.1997696	97.9%	0.006	0.025	0.025

**Emission factors from stack tests and FIRES**

**Pursuant to 326 IAC 6-1-14, PM is limited to 51.5 tons per year and 0.133 gr/dscf**

Note that 20% of the PM emissions from EU 060 are vent through the cupola stack

<b>Emission Unit</b>		<b>020 3 Electric Induction Furnaces</b>						
Pollutant	Maximum Rate (tons/hr)	Emission Factor (lbs/tons)	Uncontrolled Emission Rate (lbs/hr)	Uncontrolled Emission Rate (tons/yr)	Control Efficiency (%)	Controlled Emission Rate (lbs/hr)	Controlled Emission Rate (tons/yr)	
PM	10.5	0.90	9.45	41.4	0.0%	9.450	41.4	
PM-10	10.5	0.86	9.03	39.6	0.0%	9.030	39.6	
SO <sub>2</sub>	10.5	0.00	0.00	0.00	0.0%	0.000	0.000	
NO <sub>x</sub>	10.5	0.00	0.00	0.00	0.0%	0.000	0.000	
VOC	10.5	0.00	0.00	0.00	0.0%	0.000	0.000	
CO	10.5	0.00	0.00	0.00	0.0%	0.000	0.000	
Lead	10.5	0.0283	0.29715	1.301517	0.0%	0.297	1.302	
Mn	10.5	0.0194	0.2037	0.892206	0.0%	0.204	0.892	
Cr	10.5	0.000408	0.004284	0.01876392	0.0%	0.004	0.019	
Ni	10.5	0.000228	0.002394	0.01048572	0.0%	0.002	0.010	

**Emission factors from stack tests and FIRES**

<b>Emission Unit</b>		<b>021 1 Electric Induction Furnace</b>						
Pollutant	Maximum Rate (tons/hr)	Emission Factor (lbs/tons)	Uncontrolled Emission Rate (lbs/hr)	Uncontrolled Emission Rate (tons/yr)	Control Efficiency (%)	Controlled Emission Rate (lbs/hr)	Controlled Emission Rate (tons/yr)	Limited Emission Rate (tons/yr)
PM	4.8	0.900	4.320	18.9	0.0%	4.320	18.9	14.1
PM-10	4.8	0.860	4.128	18.1	0.0%	4.128	18.1	13.5
SO <sub>2</sub>	4.8	0.000	0.000	0.000	0.0%	0.000	0.000	0.000
NO <sub>x</sub>	4.8	0.000	0.000	0.000	0.0%	0.000	0.000	0.000
VOC	4.8	0.000	0.000	0.000	0.0%	0.000	0.000	0.000
CO	4.8	0.000	0.000	0.000	0.0%	0.000	0.000	0.000
Lead	4.8	0.02830	0.136	0.595	0.0%	0.136	0.595	0.444
Mn	4.8	0.01940	0.093	0.408	0.0%	0.093	0.408	0.305
Cr	4.8	0.000408	0.002	0.009	0.0%	0.002	0.009	0.006
Ni	4.8	0.000228	0.001	0.005	0.0%	0.001	0.005	0.004

**Emission factors from stack tests and FIRES**

**Emission limit based on 2616 tons per month production limit pursuant to 326 IAC 2-2 and CP 177-6425**

**Emission 030**

Unit 7 Electric Holding Furnaces							
Pollutant	Maximum Rate (tons/hr)	Emission Factor (lbs/tons)	Uncontrolled Emission Rate (lbs/hr)	Uncontrolled Emission Rate (tons/yr)	Control Efficiency (%)	Controlled Emission Rate (lbs/hr)	Controlled Emission Rate (tons/yr)
PM	23.3	0.056	1.3048	5.715024	0.0%	1.305	5.715
PM-10	23.3	0.056	1.3048	5.715024	0.0%	1.305	5.715
SO2	23.3	0	0.00	0	0.0%	0.000	0.000
NOx	23.3	0.00	0	0	0.0%	0.000	0.000
VOC	23.3	0	0	0	0.0%	0.000	0.000
CO	23.3	0	0	0	0.0%	0.000	0.000
Lead	23.3	2.630000000E-06	0.00006128	0.0002684	0.0%	0.000	0.000
Mn	23.3	0.000342	0.0079686	0.03490247	0.0%	0.008	0.035
Cr	23.3	0.000134	0.0031222	0.01367524	0.0%	0.003	0.014
Ni	23.3	0.0000896	0.00208768	0.00914404	0.0%	0.002	0.009

**Emission factors from AP-42**

**Emission 031**

Unit 1 Electric Holding Furnace							
Pollutant	Maximum Rate (tons/hr)	Emission Factor (lbs/tons)	Uncontrolled Emission Rate (lbs/hr)	Uncontrolled Emission Rate (tons/yr)	Control Efficiency (%)	Controlled Emission Rate (lbs/hr)	Controlled Emission Rate (tons/yr)
PM	4.8	0.056	0.269	1.177	0.0%	0.269	1.177
PM-10	4.8	0.056	0.269	1.177	0.0%	0.269	1.177
SO2	4.8	0.000	0.000	0.000	0.0%	0.000	0.000
NOx	4.8	0.000	0.000	0.000	0.0%	0.000	0.000
VOC	4.8	0.000	0.000	0.000	0.0%	0.000	0.000
CO	4.8	0.000	0.000	0.000	0.0%	0.000	0.000
Lead	4.8	0.0000026	0.000	0.000	0.0%	0.000	0.000
Mn	4.8	0.0003420	0.002	0.007	0.0%	0.002	0.007
Cr	4.8	0.0001340	0.001	0.003	0.0%	0.001	0.003
Ni	4.8	0.0000896	0.000	0.002	0.0%	0.000	0.002

**Emission factors from AP-42**

**Emission 050**

Unit 1 Tundish Ladle							
Pollutant	Maximum Rate (tons/hr)	Emission Factor (lbs/tons)	Uncontrolled Emission Rate (lbs/hr)	Uncontrolled Emission Rate (tons/yr)	Control Efficiency (%)	Controlled Emission Rate (lbs/hr)	Controlled Emission Rate (tons/yr)
PM	4	0.437	1.748	7.66	0.00	1.75	7.66
PM-10	4	0.437	1.748	7.66	0.00	1.75	7.66
SO2	4	0.000	0.000	0.000	0.0%	0.000	0.000
NOx	4	0.000	0.000	0.000	0.0%	0.000	0.000
VOC	4	0.005	0.020	0.088	0.0%	0.020	0.088
CO	4	0.000	0.000	0.000	0.0%	0.000	0.000
Lead	4	0.0000205	0.000	0.000	0.0%	0.000	0.000
Mn	4	0.0026700	0.011	0.047	0.0%	0.011	0.047
Cr	4	0.0010500	0.004	0.018	0.0%	0.004	0.018
Ni	4	0.0006990	0.003	0.012	0.0%	0.003	0.012

**Emission factors from stack tests and FIRES**

**Emission Unit 060**

**Cupola Charge Handling**

Pollutant	Maximum Rate (tons/hr)	Emission Factor (lbs/tons)	Uncontrolled Emission Rate (lbs/hr)	Uncontrolled Emission Rate (tons/yr)	Control Efficiency (%)	Controlled Emission Rate (lbs/hr)	Controlled Emission Rate (tons/yr)
PM	12.8	0.40	3.072	13.5	0.0%	3.072	13.5
PM-10	12.8	0.36	4.608	20.2	0.0%	4.608	20.2
SO2	12.8	0.00	0.00	0.00	0.0%	0.000	0.000
NOx	12.8	0.00	0.00	0.00	0.0%	0.000	0.000
VOC	12.8	0.00	0.00	0.00	0.0%	0.000	0.000
CO	12.8	0.00	0.00	0.00	0.0%	0.000	0.000
Lead	12.8	0.00	0.00	0.00	0.0%	0.000	0.000
Mn	12.8	0.00	0.00	0.00	0.0%	0.000	0.000
Cr	12.8	0.00	0.00	0.00	0.0%	0.000	0.000
Ni	12.8	0.00	0.00	0.00	0.0%	0.000	0.000

Note that the PM emissions directly to the stack are 60% of the total with 20% vented to the cupola 20% fugitive.

Emission factors from FIRES - PM adjusted to reflect the fact that 0.2 lbs/ton is for scrap preheating which is not applicable to EU 060.

**Emission Unit 070**

**Electric Furnace Charge Handling**

Pollutant	Maximum Rate (tons/hr)	Emission Factor (lbs/tons)	Uncontrolled Emission Rate (lbs/hr)	Uncontrolled Emission Rate (tons/yr)	Control Efficiency (%)	Controlled Emission Rate (lbs/hr)	Controlled Emission Rate (tons/yr)
PM	10.0	0.400	3.000	13.1	0.0%	3.000	13.1
PM-10	10.0	0.360	3.600	15.8	0.0%	3.600	15.8
SO2	10.0	0.000	0.000	0.000	0.0%	0.000	0.000
NOx	10.0	0.000	0.000	0.000	0.0%	0.000	0.000
VOC	10.0	0.000	0.000	0.000	0.0%	0.000	0.000
CO	10.0	0.000	0.000	0.000	0.0%	0.000	0.000
Lead	10.0	0.0000000	0.000	0.000	0.0%	0.000	0.000
Mn	10.0	0.0000000	0.000	0.000	0.0%	0.000	0.000
Cr	10.0	0.0000000	0.000	0.000	0.0%	0.000	0.000
Ni	10.0	0.0000000	0.000	0.000	0.0%	0.000	0.000

Note that the PM emissions directly to the stack are 75% of the total with 25% fugitive.

Emission factors from FIRES - PM adjusted to reflect the fact that 0.2 lbs/ton is for scrap preheating which is not applicable to EU 060.

**Emission Unit 080**

**Scrap Charge Preheater**

Pollutant	Maximum Rate (tons/hr)	Emission Factor (lbs/tons)	Uncontrolled Emission Rate (lbs/hr)	Uncontrolled Emission Rate (tons/yr)	Control Efficiency (%)	Controlled Emission Rate (lbs/hr)	Controlled Emission Rate (tons/yr)
PM	10.0	0.200	2.000	8.760	0.0%	2.000	8.760
PM-10	10.0	0.200	2.000	8.760	0.0%	2.000	8.760
SO2	10.0	0.000	0.000	0.000	0.0%	0.000	0.000
NOx	10.0	0.000	0.000	0.000	0.0%	0.000	0.000
VOC	10.0	0.000	0.000	0.000	0.0%	0.000	0.000
CO	10.0	0.000	0.000	0.000	0.0%	0.000	0.000
Lead	10.0	0.0101000	0.101	0.442	0.0%	0.101	0.442
Mn	10.0	0.0000000	0.000	0.000	0.0%	0.000	0.000
Cr	10.0	0.0000000	0.000	0.000	0.0%	0.000	0.000
Ni	10.0	0.0000000	0.000	0.000	0.0%	0.000	0.000

Emission factors from AP-42 and best engineering judgement

Emission Unit		090 12 Centrifugal Casting Machines Including Spinner #18, #41, #43, #45, and #47 permitted by 177-12987					
Pollutant	Maximum Rate (tons/hr)	Emission Factor (lbs/tons)	Uncontrolled Emission Rate (lbs/hr)	Uncontrolled Emission Rate (tons/yr)	Control Efficiency (%)	Controlled Emission Rate (lbs/hr)	Controlled Emission Rate (tons/yr)
PM	46.14	0.338	15.59532	68.3	89.1%	1.700	7.446
PM-10	46.14	0.338	15.59532	68.3	89.1%	1.700	7.446
SO2	46.14	0.00	0.00	0.00	0.0%	0.000	0.000
NOx	46.14	0.00	0.00	0.00	0.0%	0.000	0.000
VOC	46.14	0.00	0.00	0.00	0.0%	0.000	0.000
CO	46.14	0.00	0.00	0.00	0.0%	0.000	0.000
Lead	46.14	0.000016	0.00	0.003	89.1%	0.000	0.000
Mn	46.14	0.002060	0.095	0.416	89.1%	0.010	0.045
Cr	46.14	0.000811	0.037	0.164	89.1%	0.004	0.018
Ni	46.14	0.000541	0.025	0.109	89.1%	0.003	0.012

Dust collector estimates

Emission Unit		100 3 Shot Blasters					
Pollutant	Maximum Rate (tons/hr)	Emission Factor (lbs/tons)	Uncontrolled Emission Rate (lbs/hr)	Uncontrolled Emission Rate (tons/yr)	Control Efficiency (%)	Controlled Emission Rate (lbs/hr)	Controlled Emission Rate (tons/yr)
PM	30.0	15.500	465.000	2036.7	98.0%	9.25	40.5
PM-10	30.0	1.700	51.000	223.4	98.0%	1.015	4.445
SO2	30.0	0.000	0.000	0.000	0.0%	0.000	0.000
NOx	30.0	0.000	0.000	0.000	0.0%	0.000	0.000
VOC	30.0	0.000	0.000	0.000	0.0%	0.000	0.000
CO	30.0	0.000	0.000	0.000	0.0%	0.000	0.000
Lead	30.0	0.0007990	0.024	0.105	98.0%	0.000	0.002
Mn	30.0	0.1040000	3.120	13.666	98.0%	0.062	0.272
Cr	30.0	0.0408000	1.224	5.361	98.0%	0.024	0.107
Ni	30.0	0.0272000	0.816	3.574	98.0%	0.016	0.071

Emission factors from Fires for PM-10 and from Gutow for PM since its only shot blasting (not grinding and cleaning)

Emission Unit		100 One (1) Rotoblast Cabinet (Cleaning Mill #7) Permitted by 177-12987					
Pollutant	Maximum Rate (tons/hr)	Emission Factor (lbs/tons)	Uncontrolled Emission Rate (lbs/hr)	Uncontrolled Emission Rate (tons/yr)	Control Efficiency (%)	Controlled Emission Rate (lbs/hr)	Controlled Emission Rate (tons/yr)
PM	13.0	15.500	201.500	882.6	98.1%	3.83	16.8
PM-10	13.0	1.700	22.100	96.8	98.1%	0.420	1.839
SO2	13.0	0.000	0.000	0.000	0.0%	0.000	0.000
NOx	13.0	0.000	0.000	0.000	0.0%	0.000	0.000
VOC	13.0	0.000	0.000	0.000	0.0%	0.000	0.000
CO	13.0	0.000	0.000	0.000	0.0%	0.000	0.000
Lead	13.0	0.0007990	0.010	0.045	98.1%	0.000	0.001
Mn	13.0	0.1040000	1.352	5.922	98.1%	0.026	0.113
Cr	13.0	0.0408000	0.530	2.323	98.1%	0.010	0.044
Ni	13.0	0.0272000	0.354	1.549	98.1%	0.007	0.029

Emission factors from Fires for PM-10 and from Gutow for PM since its only shot blasting (not grinding and cleaning)

Emission Unit		Insignificant Activity Wet Liner Machining Lathing Operation					
Pollutant	Maximum Rate (tons/hr)	Emission Factor (lbs/tons)	Uncontrolled Emission Rate (lbs/hr)	Uncontrolled Emission Rate (tons/yr)	Control Efficiency (%)	Controlled Emission Rate (lbs/hr)	Controlled Emission Rate (tons/yr)
PM	0.5	8.900	4.450	19.5	90.0%	0.445	1.951
PM-10	0.5	8.900	4.450	19.5	90.0%	0.445	1.951
SO2	0.5	0.000	0.000	0.000	0.0%	0.000	0.000
NOx	0.5	0.000	0.000	0.000	0.0%	0.000	0.000
VOC	0.5	0.000	0.000	0.000	0.0%	0.000	0.000
CO	0.5	0.000	0.000	0.000	0.0%	0.000	0.000
Lead	0.5	0.0004200	0.000	0.001	90.0%	0.000	0.000
Mn	0.5	0.0540000	0.027	0.118	90.0%	0.003	0.012
Cr	0.5	0.0210000	0.011	0.046	90.0%	0.001	0.005
Ni	0.5	0.0142000	0.007	0.031	90.0%	0.001	0.003

Dust collector estimates

Emission Unit	Fugitive 060		Uncontrolled Emission Rate	Uncontrolled Emission Rate	Control Efficiency (%)	Controlled Emission Rate	Controlled Emission Rate
Pollutant	Maximum Rate (tons/hr)	Emission Factor (lbs/tons)	(lbs/hr)	(tons/yr)		(lbs/hr)	(tons/yr)
PM	12.8	0.4	1.024	4.49	0.0%	1.024	4.485

Emission Unit	Fugitive 070						
PM	10	0.4	1.000	4.38	0.0%	1.000	4.380

**Emission Unit 040 Natural Gas Indirect Fired Burner Supplying Hot Blast Air to Cupola Updated Natural Gas Emission Factors**

Heat Input Capacity  
MMBtu/hr

Potential Throughput  
MMCF/yr

14.0

122.6

Emission Factor in lb/MMCF	Pollutant					
	PM	PM10	SO2	NOx	VOC	CO
	1.9	7.6	0.6	100.0	5.5	84.0
Potential Emission in tons/yr	0.117	0.466	0.037	6.132	0.337	5.151

**Methodology**

MMBtu = 1,000,000 Btu

MMCF = 1,000,000 Cubic Feet of Gas

Emission Factors for NOx: Uncontrolled = 100, Low NOx Burner = 50, Flue gas recirculation = 32

PM factor is for filter PM only, PM10 factor is filter and condensible combined

Potential Throughput (MMCF) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1 MMCF/1,000 MMBtu

Emission Factors are from AP 42, Chapter 1.4, Tables 1.4-1, 1.4-2, 1.4-3, SCC #1-02-006-02

Emission (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton

**Emission Unit 040 Propane Indirect Fired Burner Supplying Hot Blast Air to Cupola**

Heat Input Capacity  
MMBtu/hr

Potential Throughput  
kgals/year

S = Sulfur Content =

0.0093 percent

14.00

1340.33

Emission Factor in lb/kgal	Pollutant					
	PM*	PM10*	SO2	NOx	VOC	CO
	0.6	0.6	0.8 (86.5S)	19.0	0.25	3.2
Potential Emission in tons/yr	0.402	0.402	0.539	12.7	0.168	2.14
<b>Worst Case Propane or Natural Gas</b>	<b>0.402</b>	<b>0.466</b>	<b>0.539</b>	<b>12.733</b>	<b>0.337</b>	<b>5.151</b>

**Methodology**

1 gallon of LPG has a heating value of 94,000 Btu

1 gallon of propane has a heating value of 91,500 Btu (use this to convert emission factors to an energy basis for propane)

Source - FIRES 6.21 External Combustion Sources - Industrial Rating 10 to 100 MMBTU per hour

Potential Throughput (kgals/year) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1 kgal per 1000 gallon x 1 gal per 0.0915 MMBtu

PM and PM10 Emission Factors are for filterable PM.

Emission (tons/yr) = Throughput (kgals/yr) x Emission Factor (lb/kgal) / 2,000 lb/ton

**Emission 010 Natural Gas**  
**Unit Two Cupola Afterburners each rated 8.0 mmBtu/hr**

**Updated Natural Gas Emission Factors**

Heat Input Capacity  
MMBtu/hr

Potential Throughput  
MMCF/yr

16.0

140.2

Emission Factor in lb/MMCF	Pollutant					
	PM	PM10	SO2	NOx	VOC	CO
	1.9	7.6	0.6	100.0	5.5	84.0
Potential Emission in tons/yr	0.133	0.533	0.042	7.008	0.385	5.887

**Methodology**

MMBtu = 1,000,000 Btu

MMCF = 1,000,000 Cubic Feet of Gas

Emission Factors for NOx: Uncontrolled = 100, Low NOx Burner = 50, Flue gas recirculation = 32

PM factor is for filter PM only, PM10 factor is filter and condensible combined

Potential Throughput (MMCF) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1 MMCF/1,000 MMBtu

Emission Factors are from AP 42, Chapter 1.4, Tables 1.4-1, 1.4-2, 1.4-3, SCC #1-02-006-02

Emission (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton

**Emission 010 Propane**  
**Unit Two Cupola Afterburners each rated 8.0 mmBtu/hr**

Heat Input Capacity  
MMBtu/hr

Potential Throughput  
kgals/year

S = Sulfur Content = 0.0093 percent

16.00

1531.80

Emission Factor in lb/kgal	Pollutant					
	PM*	PM10*	SO2	NOx	VOC	CO
	0.6	0.6	0.8 (86.5S)	19.0	0.25	3.2
Potential Emission in tons/yr	0.460	0.460	0.616	14.6	0.191	2.45
<b>Worst Case Propane or Natural Gas</b>	<b>0.460</b>	<b>0.533</b>	<b>0.616</b>	<b>14.552</b>	<b>0.385</b>	<b>5.887</b>

**Methodology**

1 gallon of LPG has a heating value of 94,000 Btu

1 gallon of propane has a heating value of 91,500 Btu (use this to convert emission factors to an energy basis for propane)

Source - FIRES 6.21 External Combustion Sources - Industrial Rating 10 to 100 MMBTU per hour

Potential Throughput (kgals/year) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1kgal per 1000 gallon x 1 gal per 0.0915 MMBtu

PM and PM10 Emission Factors are for filterable PM.

Emission (tons/yr) = Throughput (kgals/yr) x Emission Factor (lb/kgal) / 2,000 lb/ton

Emission Unit	Natural Gas	Insignificant Activities (see list at right)	Heat Input Capacity MMBtu/hr	Potential Throughput MMCF/yr	mmBtu/hr		mmBtu/hr	
					Group 1 Die Heater	2.00	Group 8 Spinner	2.10
					Group 2 Die Heater	2.00	Furnace #3 Preheater	1.00
					Group 1 Spinner	2.10	Furnace #4 Preheater	1.00
					Group 2 Spinner	2.10	Furnace #6 Preheater	1.00
					Group 3 Spinner	2.10	Furnace #8 Preheater	1.00
					Group 4 Spinner	2.10	Heat Treat Furnace 1	3.75
					Group 5 Spinner	2.10	Heat Treat Furnace 2	3.75
					Group 6 Spinner	2.10	Seven Air Makeup Units	35.00
							<b>Total</b>	<b>65.2</b>

Emission Factor in lb/MMCF	Pollutant					
	PM	PM10	SO2	NOx	VOC	CO
	1.9	7.6	0.6	100.0	5.5	84.0
Potential Emission in tons/yr	0.543	2.170	0.171	28.558	1.571	23.988

**Methodology**

MMBtu = 1,000,000 Btu

MMCF = 1,000,000 Cubic Feet of Gas

Emission Factors for NOx: Uncontrolled = 100, Low NOx Burner = 50, Flue gas recirculation = 32

PM factor is for filter PM only, PM10 factor is filter and condensible combined

Potential Throughput (MMCF) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1 MMCF/1,000 MMBtu

Emission Factors are from AP 42, Chapter 1.4, Tables 1.4-1, 1.4-2, 1.4-3, SCC #1-02-006-02

Emission (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton

### All Natural Gas Combustion, Including EU 010, 040, and Insignificant Activities

Heat Input Capacity  
MMBtu/hr

Potential Throughput  
MMCF/yr

95.200

833.95

#### HAPs - Organics

Emission Factor in lb/MMcf	Benzene 2.1E-03	Dichlorobenzene 1.2E-03	Formaldehyde 7.5E-02	Hexane 1.8E+00	Toluene 3.4E-03
Potential Emission in tons/yr	8.756E-04	5.004E-04	3.127E-02	7.506E-01	1.418E-03

#### HAPs - Metals

Emission Factor in lb/MMcf	Lead 5.0E-04	Cadmium 1.1E-03	Chromium 1.4E-03	Manganese 3.8E-04	Nickel 2.1E-03	Total HAPs
Potential Emission in tons/yr	2.085E-04	4.587E-04	5.838E-04	1.585E-04	8.756E-04	0.787

Methodology is the same as page 8

The five highest organic and metal HAPs emission factors are provided above.

Additional HAPs emission factors are available in AP-42, Chapter 1.4.

### Insignificant Activities

#### Dry Lathe Machining Operation

Dust collected in baghouse in 1 year is 4,000 pounds (2 tons) with a minimum collection efficiency of 99.9%

Therefore, PM = PM10 =  $4000 \times (1 - 0.999) / 2000$  lb/ton =

**0.002** tons/yr

#### Coke and Stone Conveyor

Source	AP-42 Emission Factor lbs/ton	Actual Throughput tons/day	PM = PM10 tons/year
Coke and Stone Conveyor based on 16 hours per day 140 charges per day consisting of 225 lbs of coke and 200 lbs of stone	0.000048	29.75	<b>0.0003</b>



Summary of Emissions

Significant Emission Units	Uncontrolled Potential Emissions									
	PM (tons/yr)	PM-10 (tons/yr)	SO2 (tons/yr)	NOx (tons/yr)	VOC (tons/yr)	CO (tons/yr)	Lead (tons/yr)	Mn (tons/yr)	Cr (tons/yr)	Ni (tons/yr)
010	4747.5	4743.0	70.1	5.61	10.1	8129.3	149.1	102.6	2.15	1.20
020	41.4	39.6	0.000	0.000	0.000	0.000	1.30	0.892	0.019	0.010
021	18.9	18.1	0.000	0.000	0.000	0.000	0.595	0.408	0.009	0.005
030	5.72	5.72	0.000	0.000	0.000	0.000	0.000	0.035	0.014	0.009
031	1.18	1.18	0.000	0.000	0.000	0.000	0.000	0.007	0.003	0.002
050	7.66	7.66	0.000	0.000	0.088	0.000	0.000	0.047	0.018	0.012
060	13.5	20.2	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
070	13.1	15.8	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
080	8.76	8.76	0.000	0.000	0.000	0.000	0.000	0.442	0.000	0.000
090	68.3	68.3	0.000	0.000	0.000	0.000	0.003	0.416	0.164	0.109
100	2036.7	223.4	0.000	0.000	0.000	0.000	0.105	13.7	5.36	3.57
100	882.6	96.8	0.000	0.000	0.000	0.000	0.045	5.9	2.32	1.55
Insig Wet Liner	19.5	19.5	0.000	0.000	0.000	0.000	0.001	0.118	0.046	0.031
040	0.402	0.466	0.539	12.733	0.337	5.151	0.000	0.000	0.000	0.000
060	4.49	4.49								
070	4.38	4.38								
010	0.460	0.533	0.616	14.552	0.385	5.887	0.000	0.000	0.000	0.000
Insig Gas	0.543	2.170	0.171	28.558	1.571	23.988				
Insig Dry Lathe	0.002	0.002								
Insig Conveyor	0.0003	0.0003								
<b>Total</b>	<b>7875.1</b>	<b>5279.9</b>	<b>71.4</b>	<b>61.4</b>	<b>12.5</b>	<b>8164.3</b>	<b>151.2</b>	<b>124.6</b>	<b>10.1</b>	<b>6.5</b>
Significant Emission Units	Controlled Potential Emissions									
	PM (tons/yr)	PM-10 (tons/yr)	SO2 (tons/yr)	NOx (tons/yr)	VOC (tons/yr)	CO (tons/yr)	Lead (tons/yr)	Mn (tons/yr)	Cr (tons/yr)	Ni (tons/yr)
010	99.7	99.6	70.1	5.61	10.1	812.9	3.13	2.15	0.045	0.025
020	41.4	39.6	0.000	0.000	0.000	0.000	1.302	0.892	0.019	0.010
021	18.9	18.1	0.000	0.000	0.000	0.000	0.595	0.408	0.009	0.005
030	5.72	5.72	0.000	0.000	0.000	0.000	0.000	0.035	0.014	0.009
031	1.18	1.18	0.000	0.000	0.000	0.000	0.000	0.007	0.003	0.002
050	7.66	7.66	0.000	0.000	0.088	0.000	0.000	0.047	0.018	0.012
060	13.5	20.2	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
070	13.1	15.8	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
080	8.76	8.76	0.000	0.000	0.000	0.000	0.442	0.000	0.000	0.000
090	7.45	7.45	0.000	0.000	0.000	0.000	0.000	0.045	0.018	0.012
100	40.5	4.45	0.000	0.000	0.000	0.000	0.002	0.272	0.107	0.071
100	16.8	1.84	0.000	0.000	0.000	0.000	0.001	0.113	0.044	0.029
Insig Wet Liner	1.95	1.95	0.000	0.000	0.000	0.000	0.000	0.012	0.005	0.003
040	0.402	0.466	0.539	12.733	0.337	5.151	0.000	0.000	0.000	0.000
060	4.49									
070	4.38									
010	0.460	0.533	0.616	14.552	0.385	5.887	0.000	0.000	0.000	0.000
Insig Gas	0.543	2.170	0.171	28.558	1.571	23.988				
Insig Dry Lathe	0.002	0.002								
Insig Conveyor	0.000	0.000								
<b>Total</b>	<b>286.9</b>	<b>235.3</b>	<b>71.4</b>	<b>61.4</b>	<b>12.5</b>	<b>848.0</b>	<b>5.47</b>	<b>3.99</b>	<b>0.281</b>	<b>0.179</b>

**Appendix A: Emission Calculations  
Baghouse Operations**

Page 9 of 9 TSD App A

**Company Name: Richmond Liner Foundry and Machining Plant,, Pewfect Circle Division, Dana Corporation**  
**Address City IN Zip: 2153 and 2175 Williamburg Pike, Richmond, IN 47375**  
**Part 70: : T-177-6887**  
**Plt ID: T-177-00090**  
**Reviewer: Mark L. Kramer**  
**Date: October 11, 1996**

EU	Stack/Vent DC #	Allowable Grain Loading per Dry Std. Cubic foot of Outlet Air (g/dscf)	Gas or Air Flow Rate (acfm.)	Temperature (F)	Gas or Air Flow Rate (dcfm.)	Allowable Emission Rate (lbs/hr)	Allowable Emission Rate (tons/yr)	Actual
								Emission Rate after Controls (lbs/hr)
010	010	0.133	32000.0	165.0	26601.1	30.325	132.82	22.8
020	020a	0.070	20000.0	80.0	19242.7	11.546	50.57	6.89
020	020b	0.070	20000.0	80.0	19242.7	11.546	50.57	6.89
021	020a/b	0.070	20000.0	80.0	19242.7	11.546	50.57	6.89
030	030	0.030	114000.0	2600.0	19355.9	4.977	21.80	1.31
031	031	0.030	23000.0	2600.0	3905.1	1.004	4.40	0.269
040	040	0.030	2500.0	700.0	1119.7	0.288	1.26	0.192
050	050	0.030	45000.0	80.0	43296.0	11.133	48.76	17.500
060	060	0.030	20000.0	80.0	19242.7	4.948	21.67	3.072
070	070	0.030	20000.0	80.0	19242.7	4.948	21.67	3.000
080	080	0.030	20000.0	150.0	17034.5	4.380	19.19	2.000
090	090a DC#3	0.030	20000.0	100.0	18555.4	4.771	20.90	0.184
090	090b DC#4	0.030	3500.0	100.0	3247.2	0.835	3.66	0.184
090	090c DC#5	0.030	3100.0	100.0	2876.1	0.740	3.24	0.184
090	090d DC#6	0.030	3100.0	100.0	2876.1	0.740	3.24	0.184
090	090e DC#7	0.030	3500.0	100.0	3247.2	0.835	3.66	0.184
090	090f DC#8	0.030	3100.0	100.0	2876.1	0.740	3.24	0.184
090	090g DC#2A	0.030	3100.0	100.0	2876.1	0.740	3.24	0.184
090	090h DC#1	0.030	3700.0	100.0	3432.8	0.883	3.87	0.184
100	100a DC#9	0.030	16000.0	80.0	15394.1	3.958	17.34	3.700
100	100b DC#10	0.030	16000.0	80.0	15394.1	3.958	17.34	3.700
100	100c DC#2	0.030	8000.0	80.0	7697.1	1.979	8.67	1.850
Insig.	Baghouse	0.030	2000.0	80.0	1924.3	0.495	2.17	0.445

Limited to 51.5 TPY pursuant to 326 IAC 6-1-14  
Assumed Equal PM Emission From 2 Roof Fans w/EU-020 & EU-021  
Assumed Equal PM Emission From 2 Roof Fans  
Assumed Equal PM Emission From 2 Roof Fans